

THE DISEASES OF PERSONALITY.

BY TH. RIBOT.

UNIVERSITY OF TORONTO



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THE
DISEASES OF PERSONALITY

BY
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PREFACE TO THE FIFTH EDITION.

SINCE these studies were first published (in 1884), the questions involved in the disorders and alterations of the personality have given rise to numerous works.* It is not my intention here to epitomise those investigations. That would furnish matter for a separate volume.

If we pass in review all the cases in which the personality, the unity of the ego, has been at all impaired, from slight and fugitive partial alterations to complete metamorphosis, we shall be able, I think, to divide them into two large groups: *spontaneous* alterations and *provoked* alterations.

The first, or natural alterations, are to be reached only by observation and in grave cases spring from some deep and permanent disorder of the vital functions.

The second, the artificial alterations, produced by experiment, usually by hypnotism, come from without, do not always penetrate to the profoundest parts of the individual, and remain essentially superficial and transitory, unless by repetition they create a new mental habitude.

Although the history of our subject does not go very far back,—

* Binet and Féré, *Le magnétisme animal*; Binet, *Etudes de psychologie expérimentale*; Pierre Janet, *L'automatisme psychologique*; Azam, *Hypnotisme, double conscience et altérations de la personnalité*; Bourru and Burot, *Variations de la personnalité*; Paulhan, *L'activité mentale et les éléments de l'esprit*; W. James, *Principles of Psychology*, vol. i, ch. x, numerous articles in the *Proceedings of the Society for Psychical Research*; Max Dessoir, *Das Doppel-Ich*, etc., etc.

extending, at most, over forty years,—it has two periods. In the first, spontaneous alterations were exclusively studied; in the second, following the renaissance of hypnotism, psychologists were wholly occupied with provoked and artificial disorders. While fully recognising the significance of the last-named class, I am yet inclined to believe, till proof is brought to the contrary, that the spontaneous alterations, which are the principal and almost exclusive subject of the present volume, still remain the solidest data for the study of the morbid manifestations of personality.

TH. RIBOT.

PARIS, May, 1891.

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THE DISEASES OF PERSONALITY.

INTRODUCTION.

I.

By "person" in psychological language we understand generally the individual, as clearly conscious of itself, and acting accordingly: it is the highest form of individuality. To explain this attribute, which it reserves exclusively for man, metaphysical psychology is satisfied with the hypothesis of an ego, absolutely one, simple, and identical. Unfortunately, however, this is only illusive clearness and a semblance of solution. Unless we attribute to this ego a supernatural origin, it will be necessary to explain how it is born, and from what lower form it proceeds. Accordingly, experimental psychology must propound the problem differently, and treat it by different methods. Experimental psychology learns from natural scientists that in the majority of cases it is difficult even to establish the characteristics of individuality, which are far less complex than those of personality. Hence it mistrusts simple solutions, and, far from regarding the question as solved at the outset, it looks for the solution at the close of its researches, as the result of long and laborious investigations. Therefore, it is but natural that the representatives of the old school, slightly bewildered at the situation, should accuse the adherents

of the new school of "filching their ego," although nothing justifying such a charge has ever been attempted. However, the language and the methods of the two sides are now so different, that all mutual understanding is henceforth impossible.

At the risk of increasing the already extant confusion, I propose to investigate what teratological, morbid, or simply rare, cases can teach us concerning the formation and disorganisation of personality, though without the pretension of treating the subject in its entirety, deeming such an undertaking at present premature.

Personality being the highest form of psychic individuality, the preliminary question arises: What is the individual? There are few problems that have been more debated in our time among naturalists, or that remain more obscure for the lower stages of animal life. This is not the place to go into the details of the problem. At the close of our work, after we have studied the constituent elements of personality, we shall consider this question as a whole. It will then be time to compare personality with the lower forms through which nature has essayed to produce it, and to show, that the psychic individual is the expression of an organism, being, as that is, low, simple, incoherent, or unified and complex. For the present, it will be sufficient to recall to readers at all familiar with the subject, that in descending the animal scale we always see the psychic individual formed of a more or less complete fusion of simpler individuals, as also "a colonial consciousness" created by the co-operation of local consciousnesses. These discoveries of modern naturalists are of the utmost importance to psychology. By them the problem of personality is completely transformed. Henceforth that problem must be stud-

ied from below ; while we are led to ask, whether the human person itself is also not *un tout de coalition*—a whole by coalition—the extreme complexity of which veils from us its origin, and the origin of which would remain impenetrable, if the existence of elementary forms did not throw some light upon the mechanism of that fusion.

The human personality—the only one of which we can speak with any fitness in a pathological study—is a concrete whole, a complexus. To know it, we must analyse it. But analysis here is disastrously artificial, since it disjoins groups of phenomena which are not juxtaposed, but co-ordinated, their relation being that of mutual dependence, not of simple simultaneousness. Still, the work is indispensable. Adopting a division both clear and, as I trust, self-justified, I shall study successively the *organic*, *affective*, and *intellectual* conditions of personality, chiefly emphasising their anomalies and disorders. Our final study of the subject will permit us to group anew these disjoined elements.

II.

But before entering on the exposition and interpretation of facts, it will be profitable, in the interests of clearness and candor, to get first some understanding of the nature of consciousness. It is not a question here of a monograph, embracing, so to speak, the whole of psychology; it will suffice to present the problem in a precise form.

Neglecting details, we are confronted with only two hypotheses : the one, a very old hypothesis, which regards consciousness as the fundamental property of “the soul” or “mind,” as that which constitutes its es-

sence ; the other, a very recent theory, which regards it as a simple phenomenon, superadded to the activity of the brain—as an event having its own conditions of existence, appearing and disappearing according to circumstances.

The first hypothesis has held sway for so many centuries, that it has become an easy matter to appraise its merits and deficiencies. It is not for me to call this theory to the bar ; I shall restrict myself to showing its radical incompetence to explain the unconscious life of the mind. For a long time it took no notice of this unconscious life. The precise and profound views of Leibnitz upon this question were forgotten or, at least, were not applied ; and up to the present century, the most renowned psychologists (with few exceptions) wholly limited themselves to consciousness. When finally the problem was thrust upon them, and it became plain to all that to reduce psychic life to the exclusive data of consciousness was a conception so poor and scant as to be practically useless—then great confusion arose. So-called “unconscious states” were admitted—an ambiguous and half-contradictory term, which has spread rapidly, and has its equivalent in all languages, but which clearly betrays the period of confusion in which it was born. What are these unconscious states ? Prudent writers attest their existence, without any attempt at explanation. The more venturesome speak of “latent ideas,” of “unconscious consciousness” ; expressions so vague and inconsistent that many authors have frankly admitted their defects. In fact, if the soul be conceived as a thinking substance, of which the states of consciousness are modifications, it will be impossible without manifest contradiction to impute to it unconscious states ; all shifts

of language or of dialectic are of no avail here ; and as we cannot deny the high importance of these unconscious states as factors of the psychic life, there is no exit from this inextricable situation.

The second hypothesis escapes from all this logomachy; it precludes the factitious problems that crop up in the first (for example, whether consciousness is a general or particular faculty, etc.), and we may fearlessly claim for it the benefits of the *lex parcimoniæ*. It is simpler, clearer, and more consistent. In contrast to the other, it may be characterised by saying that it expresses the unconscious in physiological terms (states of the nervous system), and not in psychological terms (latent ideas, non-felt sensations, etc.). But this is only a particular case of the hypothesis, which must be considered in its entirety.

We will first remark that consciousness, like all general terms, must be resolved into concrete data. Just as, generally speaking, there is no will, but only volitions, so also, generally speaking, there is no consciousness, but only states of consciousness. They alone are the reality. To *define* the state of consciousness, the fact of being conscious, would be a futile, supererogatory task ; it is a datum of observation, an ultimate fact. Physiology tells us that its production is always associated with the activity of the nervous system, particularly of the brain. But the reverse does not hold true. All psychic activity implies nervous activity, but all nervous activity does not imply psychic activity. Nervous activity is far more extensive than psychic activity. Consciousness, therefore, is something superadded. In other words, it is to be considered, that every state of consciousness is a complex event, which supposes a particular state of the ner-

vous system ; that this nervous process is not an adscititious, but an integral part of the event ; what is more, that it is its basis and fundamental condition ; that, when produced, the event exists *of* itself, but as soon as consciousness is added, it exists *for* itself ; that consciousness completes and perfects the event, but does not constitute it.

By this hypothesis it is easy to understand how all manifestations of psychic life, sensations, desires, feelings, volitions, memories, reasonings, inventions, etc., may be alternately conscious and unconscious. There is nothing mysterious in this change of states, since in all cases the essential conditions, i. e., the physiological conditions, for each event remain the same, while consciousness is simply its perfection.

It remains to establish why this perfection is sometimes present, and sometimes wanting. For, if in the physiological phenomenon itself there were not something more present in the first case than in the second, the victory would indirectly remain with the adverse hypothesis. Could it be proved that every time that certain physiological conditions exist, consciousness appears ; that whenever they are wanting, consciousness disappears ; and whenever they vary, consciousness also varies—then we should no longer have an hypothesis, but a scientific truth. We are still very far from this goal. In any event, we may be sure that consciousness itself will not furnish the necessary light. As Maudsley justly observes, consciousness cannot at the same time be effect and cause—cannot be itself and its molecular antecedents. It lives only for a moment, and cannot by a direct intuition return to its immediate physiological antecedents ; be-

sides, to revert to those material antecedents, would be to lay hold of, not itself, but its cause.

At present it would be chimerical to attempt even a rough establishment of the necessary and sufficient conditions of the appearance of consciousness. We know that the cerebral circulation, in the double aspect of quantity and quality of blood, is of great importance. A palpable proof of this is furnished by experiments on the heads of freshly beheaded animals. We know that the duration of the nervous processes in the centres is also of influence. Psychometric researches demonstrate daily that the more complex a state of consciousness is the longer time it requires, and that, on the other hand, automatic acts—primitive or acquired, the rapidity of which is extreme—do not enter consciousness. We can also assume that the appearance of consciousness is connected with the period of disassimilation of the nervous tissue, as Herzen has exhaustively shown.* All these results, however, are only partial conquests; the scientific knowledge of the genesis of a phenomenon supposes the determination of *all* its essential conditions.

The near future, perhaps, will furnish these. In the meantime, to corroborate our hypothesis, it will be more profitable to show, that it alone explains a chief character (not a condition) of consciousness—its *intermission*. To avoid at the outset all dubiousness, I shall observe that it is not a question here of the discontinuity of the states of consciousness among themselves. Each has its limits, which, while permitting it to associate with others, at the same time preserve its peculiar individuality. It is not this that occupies us

* *La condizione fisica della coscienza*, Rome, 1879, and *Le cerveau et l'activité cérébrale*, 1887.

here, but simply that well-known fact that consciousness has its interruptions, or, as we say in popular parlance, that "we do not always think."

It is true, this assertion has been contested by the majority of metaphysicians. They never have furnished proofs in the support of their position, and as all appearances are against it, the *onus probandi* would naturally seem to lie with them. Their whole argument reduces itself to asserting that since the soul is essentially a thinking subject, it is impossible that consciousness should not always exist in some degree, even when no trace of it is left in memory. But this is simply a begging of the question, since it is precisely their major premise that the hypothesis maintained by us contests. Their alleged proof, in fine, is simply a deduction drawn from a contested hypothesis. It is beyond our plan here to examine this in detail; a summary will suffice.

If, discarding all preconceived ideas, we abide by the simple observation of facts, we are confronted with the following great practical difficulty, that it is often impossible to decide whether the case presented is *unconsciousness* or *amnesia* (lack of memory). If a state of consciousness appears, lasts only a short time, does not organise itself in memory, leaves no trace of its passage, it is as good as non-existent for the individual. Now, the existence of such evanescent consciousnesses is demonstrated: it is not an absence of consciousness, but an absence of memory. Excluding such cases, others remain, where for impartial criticism it is impossible not to admit that the complete disappearance of consciousness is the sole probable hypothesis.

It has been maintained that there is no sleep with-

out dreams ; but this is a purely theoretical assertion. The sole argument of fact that can be pleaded in support of it is, that sometimes a sleeper, addressed or questioned, makes a proper reply, yet upon waking has no recollection of the matter. However, this fact does not justify a general conclusion.

It is to be further remarked—and this is an important point—that all who have investigated whether perfect cerebral sleep exists have been cultured and active minds, (psychologists, physicians, men of letters,) in whom the brain is ever upon the alert, like a delicate instrument vibrating to the touch of the slightest excitation, and possessed, as it were, of a habitude of consciousness. Thus, it happens that the very men who propound the problem : “Do we always dream ?” are really the least competent to supply a negative solution. But this is not the case with people engaged in manual occupations. A peasant living remote from all intellectual agitation, limited to the same occupations and the same routine of life, in general does not dream. I know several, who regard dreams as a rare accident of nocturnal life. Besides, some men of remarkable intellectual activity (Lessing, Reid, and others) affirm they have never dreamed. It is hardly probable that some sleeps, succeeding periods of great physical fatigue, are not, at least momentarily, free from dreams. In surgical operations artificial anæsthesia is rarely pushed to the point of absolute insensibility. It seems, however, that in some cases, studied by good observers* on their own persons, complete unconsciousness has been produced for a period varying from a few seconds to a minute and more. In epileptic

* See Lacassagne, *Mémoires de l'académie de médecine*, v. iii, 1869, pp. 30 and 36.

vertigo, known also by the names of "*petit mal*," "*absence*," "*attack*," a complete loss of consciousness is often observed, accompanied by a sudden interruption of sentences and their resumption, after the attack, at precisely the same point.* But I ascribe without hesitation to the account of pure amnesia the states known by the name of "*ambulatory comitial automatism*," which lasts days and hours. Moreover, in coming back to the normal state many of these sick persons voluntarily declare that "they seem to have awaked from a dream." Shocks and blows on the head, sudden commotions usually produce unconsciousness with retroactive amnesia; that is to say, the events immediately preceding the accident leave behind no traces in the memory, while there is produced thus in the mental life of the patient a gap varying in duration from a few seconds to several minutes. Dr. Hamilton, who has studied these accidents minutely from the point of view of medical jurisprudence,† and has collected twenty-six authentic cases, believes he can establish a law that retroactive amnesia is directly proportional to the duration of unconsciousness. If the last is partial and brief, retroactive amnesia embraces only a few seconds; if it is total and long, the amnesia increases proportionately.‡

I do not see what objections can be made to facts of this kind, unless, indeed, we revert to the inevit-

*Numerous examples may be found in all authors treating of epilepsy. For interrupted conversations, see especially Forbes Winslow, *On Obscure Diseases of the Brain and Mind*, p. 322 et seq.; Maudsley, *Pathology of Mind*, (French Trans.) pp. 9, 10; Puel, *De la catalepsie* (Mém. de l'acad. de méd., 1856, p. 475).

† *Loss of Consciousness*, in the Proc. of the Medico-legal Society of New York, 3rd series, 1886, p. 206 et seq.

‡ This passage, from the words "Besides, some men, etc.," replaces in the later editions of *Les Maladies de la Personnalité* a passage from Despine. — *Trans.*

able hypothesis of states of consciousness that leave no traces in memory ; but, I repeat, this is a gratuitous hypothesis, destitute of probability. People who are subject to fainting spells with loss of consciousness, well know, that pending their duration they might fall down, hurt a limb, or upset a chair, yet on recovering their senses, not have the faintest idea of what had taken place. Is it likely that if these sufficiently serious accidents had been attended with consciousness, they would not have left some memory lasting at least a few seconds? We do not deny for a moment that, in certain circumstances, normal or morbid (for example in hypnotised subjects), states of consciousness leave no apparent trace on awaking, but can later be revived ; we are willing to restrict to any desired limits the instances of complete interruption of consciousness ; but we have shown that *there are some*, and it would suffice if there were only one, to raise insurmountable difficulties against the hypothesis of the soul as a thinking substance. By the contrary hypothesis, everything is easily explained. If consciousness is an event dependent upon definite conditions, there is no cause for wonderment if it is sometimes lacking.

It would also be possible, if this were the occasion to treat exhaustively this problem, to prove, that by our hypothesis nothing uncertain or contradictory is presented by the relations of the conscious to the unconscious. The term "unconscious" may always be paraphrased thus : a physiological state, which, at times and in fact most frequently accompanied by consciousness, or at its origin having been so, in the present case is not so accompanied. This characteristic, although negative as psychology, is positive as physiology. It affirms that in every psychic event the

fundamental and active element is the nervous process, that the other is only a concomitant. Accordingly, there is no further difficulty in comprehending that all manifestations of psychic life can by turns be either unconscious or conscious. For the first case, it is necessary and sufficient that there be produced a definite nervous process, that is that there be put into play a definite number of nervous elements, forming a definite association, to the exclusion of all other nervous elements and of all other possible associations. For the latter, it is necessary and sufficient that supplementary conditions, be they what they may, be added, without alteration of the nature of the phenomenon, except making it conscious. We further comprehend how unconscious cerebration can perform such heavy tasks noiselessly, and, after long incubation, reveal itself in such unexpected results. Each state of consciousness represents only a very feeble portion of our psychic life, because at every instant it is supported and, as it were, instigated by unconscious states. Each volition, for example, dives to the very depths of our being; the motives that accompany and apparently explain it, are never more than a feeble part of its true cause. The same is true of a great number of our sympathies, and the fact is so manifest that even minds completely unused to observation often wonder at being unable to explain their aversions or sympathies.

It would be wearisome and beside our purpose to continue this demonstration. If the reader wishes, he may turn to the chapter "Phenomenology" in Hartmann's "Philosophy of the Unconscious."* Here he will find classified all the manifestations of the uncon-

* English Translation, by W. G. Coupland, London, Trübner & Co.

scious life of the mind, and he will see that there is not a single fact there cited which is not explained by the hypothesis here defended.

One point still remains to be examined. The theory that regards consciousness as a phenomenon, and which is the outcome (as might easily be shown, if the digression were opportune) of the fundamental principle of physiology that "reflex action is the type of nervous action and the basis of all psychic activity," has seemed to many benevolent persons paradoxical and disrespectful. To them it seems to rob psychology of all its solidity and dignity. They are loth to admit that the highest manifestations of nature are unstable, fugitive, superadded, and subordinate as to their conditions of existence. But this is simply a prejudice. Consciousness, whatever its origin and nature, loses not an iota of its real value: it should be appraised in itself; and for him who places himself at the point of view of evolution, not the origin, but the elevation attained, is of consequence. Experience, moreover, shows that the higher we ascend the scale, the more complex and unstable are the natural compounds. If stability afforded the true measure of dignity, then the minerals would occupy the first rank. This purely sentimental objection, therefore, is not admissible. As to the difficulty of explaining by this hypothesis the unity and continuity of the conscious subject, at present it would be premature even to moot this subject. In due time this problem, too, will find its solution.

There is, however, one weak point in this hypothesis of consciousness as a mere phenomenon. Its most convinced partisans have defended it in a form that has procured them the name of theorists of pure automa-

tism. According to their favorite comparisons, consciousness is like the flash of light thrown from a steam-engine, which illuminates it, but has no influence on its movements; its efficacy is that of the shadow that accompanies the steps of the traveller. Viewed simply as forceful illustrations of the doctrine, no objection is to be taken to these metaphors; but viewed strictly, they are exaggerated and inexact. Consciousness, in itself and by itself, is a new factor, and in this there is nothing mystical or supernatural, as we shall see.

In the first place, by the hypothesis itself (the state of consciousness supposing physiological conditions more numerous, or at least other, than the same state when unconscious) it follows that two individuals, the first being in the first state, the second in the other, all other things being equal, are strictly not comparable.

Still stronger reasons might be adduced—not logical deductions, but facts. When a physiological state has become a state of consciousness, it has acquired thereby a special character. Instead of taking place in space, that is to say, instead of admitting of conception as the putting into play of a certain number of nervous elements, occupying a definite spatial extent, it has assumed a position in *time*; it has been produced after this, and before that, while for the unconscious state there is no before nor after. It has been rendered susceptible of being recalled, that is to say, recognised as having occupied a precise position among other states of consciousness. It has become, accordingly, a new factor in the psychic life of the individual—a result that may serve as a starting-point for some new (conscious or unconscious) work; and far from being the product of a supranatural operation, it is reducible

to that organic registration which is the basis of all memory.

For greater precision, let us take a few examples. Volition is always a state of consciousness—the affirmation that a thing must either be done or prevented ; it is the final and clear result of a great number of conscious, subconscious, and unconscious states ; but once affirmed, it becomes in the life of the individual a new factor, and, in its new position, it marks a result, the possibility of being begun again, modified, prevented. Nothing similar exists with respect to automatic acts not accompanied by consciousness. Novelists and poets, usually good observers of human nature, have frequently described the well-known condition in which a passion—love or hate—long brooded upon, unconscious, ignorant of itself, at last sees light, recognises, affirms itself, becomes conscious. Then its character changes ; it redoubles its intensity, or is stopped by antagonistic motives. Here, too, consciousness is a new factor, which has modified the psychological situation. One may, by instinct, that is, by unconscious cerebration, solve a problem, but it is probable that on some other day, at some other moment, the same person will succumb to a similar problem. If, on the other hand, the solution has been reached by conscious reasoning, a failure is not likely to occur the second time ; because every step forward marks a position won, and from that moment on we no longer grope in the dark. This, however, does not diminish in the least the part played by unconscious work in all human discoveries.

These examples taken at hazard will suffice to show, that the metaphors referred to are true of each state of consciousness *in itself*. In itself, it is indeed

merely a light without efficacy, the simple revelation of an unconscious work; but in relation to the future development of the individual it is a factor of supreme importance.

What is true of the individual is true also of the species, and of the succession of the species. In the sole point of view of the survival of the fittest, and irrespective of psychological considerations, the appearance of consciousness upon earth was a fact of the first magnitude. Through it experience, that is to say, adaptation of a higher order, became possible for the animal. It is not for us to investigate its origin. On this point, very ingenious hypotheses have been advanced, which enter the domain of metaphysics, and which experimental psychology is not obliged to discuss, since it takes consciousness as a *datum*. It is probable that consciousness was produced like every other vital manifestation, first, in a rudimentary form, and, to all appearances, without much efficacy. But from the moment it was able to leave behind it a vestige, to build up in the animal a memory, in a psychic sense, which capitalised its past for the profit of its future, from that moment a new chance of survival was created. To unconscious adaptation, blind, accidental, dependent upon circumstances, was added a conscious adaptation, uninterrupted, dependent upon the animal, surer and quicker than the other; and that abridged the work of selection.

The rôle of consciousness in the development of psychic life is thus evident. If I have dwelt at length upon this point, it is because the advocates of the hypothesis here supported have considered it only as it actually is, without occupying themselves with the results of its appearance. They have said that it il-

luminates ; but they have not shown that it adds. To repeat once more our position : consciousness, in itself, is simply a phenomenon, simply an accompaniment. If animals existed, in which at every instant it appeared and disappeared, without leaving behind it the slightest traces, it would be rigorously correct to call such animals spiritual automatons ; but if the state of consciousness leaves behind it traces, records itself in the organism, then it not only acts as an indicator, but also as a condenser. The metaphor of the automaton is no longer acceptable. This being admitted, many of the objections to the theory of consciousness as a phenomenon fall of themselves. The theory is completed, without being invalidated.

CHAPTER I.

ORGANIC DISORDERS.

I.

I SHALL dwell at length upon the organic conditions of personality ; for everything is based upon them, and they explain all. Metaphysical psychology, with logical consistency, has paid no attention to these conditions ; for this science derives its ego from above, not from below. With us, however, the elements of personality must be sought for in the most elementary phenomena of life ; it is they that give it its distinctive mark and character. It is the organic sense, the sense of the body, usually vague and obscure, but at times very clear in all of us, that constitutes for each animal the basis of its psychic individuality.* It is that "principle of individuation" so much sought after by scholastic doctors ; for directly or indirectly all rests upon it. We may regard it as highly probable, that the farther we descend in the animal scale the more the sense of the body preponderates, down to the point where it becomes the entire psychic individuality. But

* Incidentally, I may observe that a great metaphysician, Spinoza, plainly supports the same thesis, although in different terms : "The object of the idea that constitutes the human soul is the body . . . and nothing else." "The idea that constitutes the formal existence of the human soul is not simple, but composed of several ideas." (*Ethics*, part ii. propositions 13 and 15. See also the scholium of prop. 17.)

in man and the higher animals the turbulent world of desires, passions, perceptions, images, and ideas covers up this silent background. Except at intervals, it is forgotten, because it is unknown. It is here as in society. The millions of human beings that make up a great nation are reduced, both for itself and others, to a few thousand men, who constitute its clear consciousness, and epitomise its social activity in all its aspects, its politics, its industry, its commerce, and its intellectual culture. Yet it is these millions of unknown beings—limited in mode and place of existence, quietly living and quietly passing away—that make up all the rest; without them there is nothing. They constitute that inexhaustible reservoir, from which, by rapid or abrupt selection, a few come to the surface. But these favorites of talent, power, or wealth themselves enjoy only an ephemeral existence. Degeneracy—always fatally inherent in that which rises—will again lower them or their race, while the silent work of the ignored millions will continue to produce others, and to impress upon them a distinctive character.

Metaphysical psychology only scans the heights; and internal observation does not continue long its recital of what takes place within the body; thus, from the outset, the study of the general sensibility has been mainly the work of physiologists.

Henle (1840) defines the general sensibility or “*cœnæsthesia*” as “the *tone* of the sensory nerves, or the perception of the state of mean activity in which those nerves are constantly found, even in moments when they are not excited by external impressions.” And elsewhere: “General sensibility is the sum total, the not yet unravelled chaos of the sensations incessantly transmitted from every point of the body to the

sensorium."* Still more precise is E. H. Weber's definition of the term: an internal sensibility, an interior touch that furnishes to the sensorium information concerning the mechanical and chemico-organic state of the skin, the mucous and serous membranes, the viscera, the muscles, and the articulations.

In France, Louis Peisse, a philosopher-physician, was the first to combat the doctrine of Jouffroy, who held that we know our body only objectively, as an extended, solid mass, similar to other bodies of the universe, placed outside the ego, and foreign to the perceiving subject, exactly as we know our table or our mantelpiece. Peisse showed, although in somewhat cautious terms, that our knowledge of our body is pre-eminently subjective. His description of this organic consciousness is, in my judgment, too exact, not to be quoted entire.

"Is it certain," he says, "that we have absolutely no consciousness of the activity of the organic functions? If the question be of a clear, distinct, and locally determinable consciousness, like that of external impressions, it is plain that we lack it; but we may possess a dull, obscure, and, as it were, latent consciousness of it, the analogue, for example, of that of the sensations which provoke and accompany the respiratory movements—sensations, which, though incessantly repeated, are scarcely noticed. In fact, might we not regard as a distant, faint, and confused echo of the universal vital activity that remarkable feeling which ceaselessly and without intermission tells us of the presence and actual existence of our own body? Almost always, and wrongly, this feeling is confounded

* *Pathologische Untersuchungen*, 1848, p. 114. *Allgemeine Anatomie*, 1841, p. 728

with the accidental and local impressions that in waking hours arouse, stimulate, and maintain the play of the sensibility. These sensations, though incessant, make only fugitive and transient appearances on the stage of consciousness, while the feeling we speak of lasts and persists amid all this mobile display. Condillac appropriately termed it the fundamental feeling of existence; Maine de Biran called it the feeling of sensuous existence. By this feeling the body incessantly appears to the ego *as its own*, and by it the spiritual subject feels itself and perceives itself to exist locally, within the bounded extent of the organism. A constant, unfailing monitor, it renders the state of the body incessantly present to consciousness, and thus shows forth, to its depths, the indissoluble bond of the psychic and the physiological life. In the ordinary state of equilibrium which constitutes perfect health, this feeling, we may say, is continuous, uniform, and equable, which prevents its reaching the ego and attaining the state of distinct, special, and local sensation. To be distinctly noticed, it must acquire a certain intensity; it is then expressed by a vague sense of general well-being or illness; the former signifying a simple exaltation of the vital physiological activity, the latter its pathologic perversion. But in such cases it does not fail to localise itself in the form of specific sensations, connected with this or that region of the body. It sometimes reveals itself in a more indirect, but far more evident, manner, when it happens to be wanting in some part of the organism; for example, in a limb struck by paralysis. Such a limb still naturally belongs to the living aggregate, but it is no longer comprised within the sphere of the organic ego—if we may use that expression. It ceases to be perceived by the

ego as its own, and the fact of this separation, though negative, is expressed by a particular, positive sensation, known to all who have experienced a complete numbness of any member by cold or a compression of the nerves. The sensation referred to is nothing more than the expression of the break or loss which the universal feeling of the bodily life suffers; it proves that the vital state of the limb in question really existed, though obscurely felt, and that it constituted one of the partial elements of the general feeling of life of the organic whole. Similarly, any continuous, monotonous noise—as that of a coach in which we ride—ceases to be perceived, although always heard; for if it suddenly stops, its cessation is instantly remarked. This analogy may help us to understand the nature and mode of existence of the fundamental feeling of organic life, which by this hypothesis would be simply a resultant *in confuso* of the impressions produced on all the living points by the internal movement of the functions, carried to the brain, directly by the cerebro-spinal nerves, or indirectly by the nerves of the ganglionic system.” *

Since the epoch in which this passage was written (1844) psychologists and physiologists have been steadily at work studying the elements of this general sense of the body. They have determined what share each vital function contributes; they have shown how complex this confused feeling of life is, which by incessant repetition has become ourselves; that searching after it would be equivalent to seeking ourselves. Consequently, we know it only by the variations that lift it above, or force it below the normal tone. The reader

* Note to his edition of the *Rapports du physique et du moral* of Cabanis, pp. 108, 109.

will find in special works* the detailed study of these vital functions and their psychical disorders. It is beside our purpose here to enter into a special investigation of these topics, so a brief *résumé* will suffice.

In the first place, we have the organic sensations connected with respiration: the feeling of comfort produced by pure air, of suffocation from close air; the sensations arising from the alimentary canal; others, still more general, connected with the state of nutrition. Hunger, for example, and thirst, despite appearances, have no precise localisation; they result simply from a discomfort of the whole organism. They are the loud pleadings of a too impoverished blood. As to thirst especially, the experiments of Cl. Bernard have shown that it arises from lack of water in the organism, and not from dryness of the pharynx. Of all the functions, general and local circulation exerts, perhaps, the greatest psychological influence, and its variations import the most from individual to individual, and in different moments within the same individual. Let us recall further the organic sensations that arise from the state of the muscles: the feeling of fatigue, exhaustion, or its reverse; finally the group of muscular sensations which, associated with the external sensations of sight and touch, play such a prominent part in the creation of our knowledge. Even reduced to itself alone, in its purely subjective form, muscular sensibility will reveal the degree of contraction or relaxation of the muscles, the position of our limbs, etc. I omit purposely the organic sensations of the genital organs; we shall revert to this subject when studying the affective bases of personality.

* See especially Bain, *The Senses and the Intellect*, part i, chap. ii, and Maudsley, *Pathology of Mind*, pp. 31 et seq.

If the reader will picture to himself a moment the multitude and diversity of the vital actions just classified, by running over them in a general way, he will be able to form some idea of what is to be understood by the expression, "physical bases of personality." Constantly active, they make up by their continuity for their weakness as psychic elements. Hence, as soon as the higher forms of mental life disappear, they assume the first rank. A clear example of this is found in dreams (pleasant or painful) aroused by organic sensations; as night-mares, erotic dreams, etc. It is even possible to assign with some precision to each organ the place that belongs to it in these dreams: the sensation of weight seems mainly connected with the digestive and respiratory organs; the feeling of struggle and combat with the affections of the heart. In rarer instances pathological sensations, unperceived during waking hours, re-echo in sleep like premonitory symptoms. Armand de Villeneuve dreams that he is bitten in the leg by a dog; a few days later that same leg is attacked by a cancerous ulcer. Gessner, in his sleep, fancies he is bitten in the left side by a serpent; a little later at the same spot an anthrax developed of which he died. Macario dreams he has a very sore throat; he rises in normal health; a few hours later is attacked by a severe amygdalitis. A man sees in a dream an epileptic; a short time afterwards he becomes one himself. A woman dreams that she speaks to a man who cannot reply to her, because he is dumb; on waking she herself has lost the power of speech. In all these cases we seize as facts those obscure incitations which, from the depths of the organism, reach the nervous centres, and which our con-

scious life, with all its turmoil and perpetual mobility, conceals instead of revealing.

It is clear that the exclusive faith so long accorded by psychology to the sole data of consciousness, must have completely overshadowed the organic elements of personality; by profession, however, the physicians always clung to them. The doctrine of the temperaments, old as medical science itself, ever criticised and ever remodelled,* is the vague and uncertain expression of the principal types of the physical personality, as furnished by observation, with the principal psychological traits that spring from them. Thus, the few psychologists who have studied the different types of character, have sought their point of support in this doctrine. Kant did so more than a century ago. If the determination of the temperaments could be rendered scientific, the question of personality would be greatly simplified. Until this takes place, the most important task will be, to rid ourselves of the purely preconceived notion that personality is a mysterious attribute, dropped from the skies, without antecedents in nature. If we simply cast our glance at the animals about us, we shall readily admit, that the difference between horses and mules, between geese and ducks, their "principle of individuation," can only be derived from a difference of organisation and of adaptation to environment, with the psychical consequences that thence result; and that in the same species the differences of

* Henle has recently attempted (*Anthropologische Vorträge*, 1877, p. 103-130), to connect the temperaments with different degrees of activity, or *tone*, of the sensory and motor nerves. When this degree is at its lowest, we obtain the phlegmatic temperament. At a high degree, with a rapid exhaustion of nerves, we have the sanguine temperament. The choleric also supposes a high *tonus*, but with persistence in the nervous action. The melancholic temperament cannot be defined by the simple quantity of the nervous action; it supposes a high *tonus*, with the tendency to emotions rather than to voluntary activity.

one individual from another cannot originally be owing to any other cause. In the natural order of things there is no reason for making an exception of man ; the difficulty is that here the excessive development of the intellectual and emotional faculties creates illusion, and masks the origins.

We may now ask whether "physical personality" exists in nature ; understanding by that term the mere feeling of the state of the organism ; a mode of being where, by hypothesis, all consciousness, clear or obscure, actual or reproduced, of external facts is absent? Evidently not among the higher animals ; physical personality, in the sense postulated, can be regarded only as a very artificial abstraction. It is probable that that form of psychic individuality which consists simply of the consciousness which the animal has of its own body, exists in very low species, but not in the lowest.

In the latter,—for example, in multicellular individuals composed of cells absolutely alike,—the constitution of the organism is so homogeneous that each element lives for itself, and each cell has its own special action and reaction. But, taken together, they no more represent an individual than six horses, drawing a carriage in the same direction, constitute a single horse. There is neither co-ordination nor consensus, but simply juxtaposition in space. If, as some authors do, we assign to each cell the analogue of consciousness (which would be only the psychic expression of their irritability), we shall obtain consciousness in a state of complete diffusion. An impenetrability of one element towards the other would exist, that would leave the entire mass in the state of living matter, without even external unity.

But higher up, for example in *Hydra*, observation shows a certain consensus in the actions and reactions, and a certain division of work. Yet the individuality is very precarious. With his scissors Trembly cut fifty individuals from one. Conversely, out of two hydras we can form one; simply by turning the smaller inside out, before introducing it into the larger, so that the two endoderms touch and blend. So far as one can venture an opinion on this obscure matter, the adaptation of the movements seems to denote a temporary, unstable unity, at the mercy of circumstances, yet probably not wholly destitute of some obscure consciousness on the part of the organism.

If we find we are still too low, we may ascend the scale (for every determination of this kind is arbitrary), to fix the point at which the animal has only the consciousness of its organism, of what it suffers and creates—only an organic consciousness. Perhaps, this form of consciousness, in the pure state, does not exist; for, as soon as the rudiments of the special senses appear, the animal rises above the level of general sensibility. Besides, it must be asked, Is general sensibility sufficient of itself to constitute a consciousness? It is known that the human foetus makes efforts to extricate itself from inconvenient positions, to avoid impressions of cold or painful irritations. Are these unconscious reflexes?

But I hasten away from such conjectures. One thing, at least, is incontestable; it is, that the organic consciousness (the consciousness which the animal has of its body and only of its body) possesses, in the greater part of animal existence, an enormous preponderance; that it stands in an inverse ratio to the higher, psychic development; that, everywhere and

always, this consciousness of the organism is the basis upon which individuality rests. By it all is; without it nothing is. Indeed, the contrary is inconceivable; for do not the external impressions—the first matter of all mental life—enter by the organism, and—what is still more important—are not the instincts, feelings, aptitudes proper to each species, to each individual, stamped and fixed by heredity in the organism—we know not how, but facts prove it—with impregnable solidity?

II.

If, then, we admit that the organic sensations coming from all the tissues, organs, and movements—in a word, from all the states of the body—are in some degree and form represented in the *sensorium*; and if the physical personality is simply their sum total, it follows that the physical personality must vary as they vary, and that these variations admit of all possible gradations, from simple ill-health to a total metamorphosis of the individual. The examples of “double personality” that have recently been made so much of (we shall speak of them later on) are only extreme cases. With patience and careful research one could find in mental pathology sufficient observations to establish a progression, or rather a continuous regression, from the most transient change to the most complete alteration of the ego. That the ego exists only on the condition of continually changing, is an incontestable fact. As to its identity, that is simply a question of quantity. Its identity persists so long as the sum of the states that remain relatively fixed is greater than the sum of the states that are added to or detached from this stable group.

For the present, we have only to study the disorders of personality immediately connected with organic sensations. As by itself the general sensibility has only a very feeble psychic value, it produces only partial disorders, except where the alteration is total or sudden.

To begin, we shall notice a state, hardly morbid, yet probably well-known to all, which consists in a feeling of exuberance or depression, without apparent cause. The usual tone of life changes, rises, or falls. In the normal state we have a positive "euphoria"; neither comfort or discomfort spring from the body. But sometimes the vital functions become exalted; activity superabounds and seeks to expend itself; everything appears easy and favorable for us. This state of well-being, at first entirely physical, is propagated throughout the whole nervous organisation, and awakens a multitude of pleasant feelings, to the exclusion of others. Everything looks bright. At other times the contrary occurs: disease, despondency, listlessness, impotence, and—as consequences of melancholy—fear, painful or depressing feelings. At such times everything looks black. In either case, moreover, there is no intelligence, no event, nothing external to us, to justify this sudden joy or sadness.

Surely it cannot be said that the personality is transformed, in an absolute sense. Relatively it has been so. For himself, and more so for others who know him, the individual is changed, is not the same. This, translated into the language of analytic psychology, means, that his personality is made up of elements some of which are relatively fixed, others variable; that the variable parts having far exceeded their

average power, the stable portion has been impaired, but has not disappeared.

Now, if we suppose (a supposition daily realised) that instead of disappearing to return after a short interval to the normal state, this change persists, in other words, if the physical causes that induce the change are permanent, and not transitory, then a new physical and mental habitude will be formed, and the centre of gravity of the individual will tend to be displaced.

This first change may give rise to others, so that the transformation constantly increases. For the present I shall not discuss this subject. I simply wished to show that from a common state by imperceptible degrees we can descend to complete metamorphosis; it is simply a question of degree.

In studying the disorders of personality, it is impossible to determine rigorously those that have their *immediate* cause in the perturbations of the general sensibility, as the latter by secondary actions excite psychic states of a higher order (hallucinations, emotions, and morbid ideas). I shall limit myself to cases where they appear to preponderate.

We shall find in the "*Annales médico-psychologiques*"* five observations which the author has grouped under this title: "An Aberration of the Physical Personality." Without cavilling at the title, which says perhaps more than it ought, we see here, without external cause, an unknown organic state, an alteration of the *cœnæsthesis*, produce a feeling of corporeal annihilation. "In the fulness of health, and while possessed of exuberant vitality and strength, the patient experiences an ever-increasing sensation of weakness, such, that he is in momentary fear of fainting

* September, 1878. 5e série, vol. xx, pp. 191-223.

and of death." However, the sensibility remains intact; the patient eats with appetite, and if his will is opposed he reacts with great energy; but he keeps repeating that he feels his life is slowly ebbing away; that only a few hours are left for him to live. Naturally, on this purely physical trunk are also grafted delirious conceptions: one subject believes he is poisoned, another maintains that a demon has entered his system and is "sucking his life away," etc.

But let us keep to the immediate consequences of the physical state. We find here that state of despondency, already described and known to everybody, in a much graver and more stable form. The mental disorder grows apace and systematises itself. The individual tends no longer to be the same. It is a new step in the dissolution of the ego, although as yet far from being attained.

This commencement of transformation, due to wholly physical causes, is also met with in persons who maintain that they are wrapped in a veil or a cloud, cut off from the external world, insensible. Others (and such phenomena are naturally explained by troubles of the muscular sensibility) rejoice at the lightness of their bodies; feel as if suspended in mid-air; believe they are able to fly; or have a feeling of heaviness, in the whole body, in certain limbs, or in a single limb, which seems stout and heavy. "At times a young epileptic felt his body so extraordinarily heavy, that he could scarcely support it. At other times he felt so light that he fancied he did not touch the ground. Sometimes it seemed to him that his body had become so great that it would be impossible to pass through a door."* In this last illusion, which refers

*Griesinger, *Traité des maladies mentales*, French trans. (Doumic), p. 92.

to the dimensions of the body, the patient feels himself much smaller or much larger than he really is.

The *local* perversions of the general sensibility—although by nature limited—are of no less psychological importance. Some subjects assert that they no longer have teeth, mouth, stomach, intestines, brain: which can only be explained by a suppression or alteration of the internal sensations that exist in the normal state and contribute to constitute the notion of the physical ego. To the same cause, at times aggravated by cutaneous anæsthesia, we must refer the cases where the patient believes that one of his limbs or even his whole body, is of wood, glass, stone, butter, etc. A while afterwards, he will say, that he has no body at all, that he is dead. Instances of the kind are frequently encountered. Esquirol speaks of a woman who believed that the Devil had carried off her body; the surface of her skin was completely insensible. The physician Baudelocque, during the last period of his life, lost all consciousness of the existence of his body: he maintained he no longer possessed head, arms, etc. Finally, there is Foville's widely known case. "A soldier believed himself dead since the battle of Austerlitz, at which he had been seriously wounded.* When asked about his condition, he would reply: 'You want to know how old Lambert is? He is dead; he was carried off by a cannon-ball. What you see here is not he, but a poor machine that they have made, in imitation of him; you ought to ask them to make another.' In speaking of himself, he never said 'I,' but 'that thing.' His skin was insensible, and often he would fall into a state of complete insensibility and immobility, lasting several days."

* Michéa, *Annales médico-psychologiques*, 1856, p. 249 et seqq.

We enter here the realm of grave disorders ; meeting for the first time a double personality, or more strictly speaking, a discontinuity, a lack of fusion between two periods of psychic life. The case might be thus interpreted. Before his accident, this soldier, like every one else, had his organic consciousness, the sense, the feeling of his own body, of his physical personality. After the accident a profound change was produced in his nervous organisation. Concerning the nature of this change we can unfortunately only form hypotheses, the effects alone being known. Whatever it may have been, it resulted in the formation of another organic consciousness—that of a “poor machine.” Between this and the old consciousness, the memory of which still tenaciously remains, no amalgamation is effected. The feeling of identity is lacking ; because in the organic states as well as in the others, this feeling can only result from a slow, progressive, and continuous assimilation of the new states. Here, the new states did not enter the old ego as an integral part. Hence, that odd situation in which the old personality appears to itself as having been, and as being no more, and in which the present state appears as an external, foreign thing, and as non-existent. Be it remarked, finally, that in a state where the surface of the body no longer yields sensations, and where those that do arrive from the organs are equivalent almost to none at all ; where both superficial and profound sensibility is extinguished—in such a state the organism no longer excites the feelings, images, and ideas that connect it with the higher psychical life : it is reduced to the automatic acts that constitute the habitude or routine of life ; properly speaking, it is “a machine.”

In a very strict sense we might maintain, that the only personality in this example is the personality which recollects ; but we must acknowledge that it is of a very extraordinary nature, existing only in the past ; and that, instead of calling it a person, it would be more exact to call it a memory.

What distinguishes this case from those which we shall speak of elsewhere, is, that here the aberration is altogether physical, springs solely from the body and refers solely to the body. This old soldier did not imagine himself *another* (Napoleon, for example, although he was at Austerlitz). The case thus is as free as possible from intellectual elements.

The illusion of patients or convalescents who believe themselves double, must also be referred to perturbations of the general sensibility. At times the illusion is pure and simple, without doubling : the morbid state is projected outwards ; the individual alienates a part of his physical personality. Such are the patients of whom Bouillaud speaks, who having lost the sensibility of half of their body, imagine they have beside them in bed another person, or even a corpse. But when the group of morbid organic sensations, instead of thus being alienated, cleaves to the normal, organic ego, and coexists with it for a time, without fusion, then and during that time the patient believes that he has two bodies. "A man convalescing from a fever believed he consisted of two individuals, of which one was in bed, while the other walked about. Although without appetite, he ate a great deal, having, as he said, two bodies to feed."*

"Pariset, in his early youth having been attacked by an epidemic typhus, remained several days in an

*Leuret, *Fragments psychologiques sur la folie*, p. 95.

extremely low state, verging on death. One morning a more distinct feeling of himself was suddenly awakened. He began to think; the impression was that of a genuine resurrection; but, strange to say, at the same instant he had, or believed he had, two bodies; and these bodies seemed to him to lie in two different beds. In so far as his soul was present in one of these bodies, he felt healed, and enjoyed a delightful repose. In the other body his soul suffered, and he argued with himself: Why am I so well in this bed, and so ill and oppressed in the other? This thought occupied him for a long while. Pariset himself—a man exceedingly subtle in psychological analysis—has often related to me the detailed history of the impressions which he experienced at that time.”*

In the above we possess two examples of double *physical* personality. Although we are still not far advanced in our study, the reader may see that, closely examined, the two cases referred to are really unlike. The current term “double personality” is simply an abstraction. As soon as we translate it into concrete facts, into authentic observations, we find only diversity. Each case, so to speak, calls for special interpretation. *A priori*, that might be expected. If, as we maintain, and as we shall gradually attempt to prove, personality is a very complex compound, it is manifest that its perturbations must be multiform. Each case shows it differently decomposed. Disease becomes a subtle instrument of analysis; it makes experiments impossible by any other method. The difficulty is to interpret them properly; but even errors can only be transitory, since the facts which the future has in store will serve either to disprove or to rectify them.

*Gratiolet, *Anatomie comparée du système nerveux*, vol. ii, p. 548.

III.

The part sustained by the physical personality as an element of the total personality is so important and has been so much neglected, often intentionally, that too much light cannot be shed upon it. In this connexion we may derive much profit from the consideration of a number of rare cases which psychology has overlooked but which bring to the support of our thesis the supplemental evidence of facts which, if they are not more convincing, are at least more striking. I refer to the double monsters.

We must admit that the available data of such cases are very meagre. Nature does not multiply monsters, and of the seventy or eighty species pointed out by teratologists, the majority have no interest for us. Of double monsters, moreover, many do not reach the adult age. The anatomist and physiologist may learn much from them, but not the psychologist. Furthermore, good observations on this subject rarely reach back more than a century. Beyond that date, the marvellousness and vagueness of the descriptions recorded nullify their value.

The ego, it has often been affirmed, is impenetrable; it forms by itself a complete, perfectly limited whole: which is a proof of its essential unity. That assertion, as a fact, is incontestable; but the impenetrability referred to is merely the subjective expression of the impenetrability of the organism. It is because one definite organism cannot be another organism, that one ego cannot be another ego. But if, by a concurrence of causes which we need not here enumerate, two human beings, whose condition dates from the

fœtal stage, be united together at some part of their bodies, while their heads, the essential organs of human individuality, remain perfectly distinct, then something like this state of things will exist: each organism will no longer be completely limited in space, and distinct from every other organism; there will be a joint and undivided part common to both; and if, as we maintain, the unity and complexity of the ego are only the subjective expression of the unity and complexity of the organism, there will be of necessity, in the case presented, a partial penetration of the two egos, and there must exist a determinate element of psychic life held in common by them, that cannot be said to belong to an *I*, but must belong to a *We*. Each individual is thus a little less than an individual. Which has been fully corroborated by experience.

“From an anatomical point of view a double monster is always more than a single individual, and less than two; at one time it approaches nearer to unity, at another nearer to duality. In the same way, from a physiological point of view, a double monster is always possessed of something more than a single life, and of something less than two lives; but its double life may tend alternately to unity or to duality.

“Keeping merely to the phenomena of sensibility and of will, a monster composed of two almost complete individuals, united only at one part of their body, will be double morally as well as physically. Each individual will have a sensibility and a will of its own, the effects of which will extend to its own body, and to its alone. It may even happen that the twins, widely different in facial outlines, stature, and physical constitution, are no less so in point of character and in degree of intelligence. At the same moment one will

be merry, and the other sad; one will want to walk, while the other will want to rest; and from this conflict of two wills, animating two bodies indissolubly bound together, movements may arise that are wholly without results, that end neither in resting nor in walking. These two human halves may quarrel, or even come to blows. . . . Thus their moral duality, the consequence of their physical duality, is demonstrated by a hundred proofs. But, at the same time, as a point exists in the double body, situated at the line of division of the two component individuals, and which is common to both, other phenomena, though less numerous, indicate in them the beginnings of unity.

“Impressions made upon the region of union, especially if made at its central point, are perceived at the same time by both the brains, and both are able to react upon the impressions in the same manner. . . . Let us add, that although peace is often ruptured between the twins, still there nearly always prevails between them a harmony of feelings and desires, a sympathy and reciprocal attachment, of which it is impossible to appreciate the full extent without having read the whole evidence. . . .

“The same and still other phenomena are presented where, by a still more intimate union, we find two heads with one body and only a single pair of legs. Anatomical analysis shows that in such beings each individual possesses as its own, one side of the common body and one of the two legs. The observation of physiological and psychological phenomena fully corroborates this singular result. Impressions made at any point along the axis of union are perceived at the same time by both the heads; beyond and at a distance from the axis impressions are perceived by

only one head ; and it is the same with the will as with the sensations. The right brain feels only by the right leg, acts only upon the right leg, the left by the left, and so forth ; so that the act of walking results from movements executed by two limbs belonging to two different individuals and co-ordinated by two distinct wills.

“ Finally, in parasitic monsters, where the organisation approaches unity, all vital acts, sensations, and manifestations of will are performed almost exactly as they are in normal beings. The smaller of the two individuals, having become a subordinate and inert portion of the larger, exerts but a feeble influence upon it, limited to a very small number of functions.”*

To these general traits we shall add a few details borrowed from the most celebrated cases.

We possess numerous records concerning Helen and Judith, a bi-female monster, born at Szony (Hungary) in 1701, died at Presbourg at the age of twenty-two. The bodies were placed almost back to back, being joined at the buttocks and a part of the loins. The sexual organs were double externally, but with a single vulva hidden between the four thighs ; there were two intestines terminating in a single anus. The two aortæ and two inferior venæ cavæ communicated at their lower extremities, and thus formed two large and direct communications between the two hearts : hence a semi-communion of life and functions. “ The two sisters had neither the same temperament nor the same character. Helen was taller, prettier, more agile, more intelligent, and of a sweeter disposition. Judith,

* I. Geoffroy Saint-Hilaire, *Histoire des anomalies*, v. iii, p. 373. The monster called “ Home’s epicome ” had a parasitic head which exhibited only a very imperfect outline of the normal form and life.

who had been attacked at the age of six with a partial paralysis, was smaller and more sluggish. She was slightly malformed, and had a somewhat difficult utterance. She spoke, nevertheless, like her sister, Hungarian, German, French, and even a little English and Italian. Each seemed to have a tender affection for the other, although in their infancy they had sometimes quarrelled and even come to blows. The needs of nature were felt simultaneously, except in the case of urination. They had been simultaneously afflicted with measles and small-pox; and if a malady attacked one alone, the other experienced internal discomfort and keen anxiety. Finally Judith was struck down with a disease of the lungs and brain. Helen, attacked several days afterwards with a low fever, lost her strength almost at once, though still preserving her clearness of mind and the faculty of speech. After a brief struggle she too fell a victim, not to her own, but to her sister's maladies. Both expired at the same instant."

The Siamese twins, Chang-Eng, born in 1811, in the kingdom of Siam, were joined at the xiphoid appendix by a cartilaginous band in the centre of which was their common umbilicus. After a description of their external appearance, I. Geoffroy Saint-Hilaire adds: "The two brothers exhibit also in their other functions [other than respiration and arterial pulsation] a remarkable concordance, though not absolutely constant, as some have been pleased to maintain, and as Chang and Eng themselves have stated to persons who were satisfied with putting to them a few vague questions. Doubtless, there is nothing more singular than the contrast of an almost complete physical duality and of an absolute moral unity; but, at the same time,

nothing is more opposed to sound theory. I have carefully made all observations, and sought out all information, that could enlighten me upon the value of so frequent an assertion, and I have found that in the conflict between the misconstrued principles of theory and the psychological assertions of which the unity of the Siamese twins has formed so long the inexhaustible text, the facts—as was to be expected—have rendered a verdict in favor of the former. Twins, formed upon two almost identical types; submitted inevitably during their life to the influence of the same physical and moral circumstances; similar in organisation and education—the Siamese brothers became two beings whose functions, actions, words, and even thoughts, are almost always concordant, conceived and produced in parallelisms. . . . Their joys and griefs are common. In these twin-souls the same desires are manifested at the same instant; a phrase begun by one, is often finished by the other. But all these concordances prove parity, not unity. Twins in the normal state frequently present similarities, and would doubtless reveal still more remarkable ones, if during their whole life they had always seen the same objects, felt the same sensations, enjoyed the same pleasures, and suffered the same griefs. . . .” * I will add that with advancing age and as the result of circumstances the differences of character of the two twins became more and more marked, and that one of their last observers describes one as morose and taciturn, the other as gay and cheerful.

The subject of the present work not being a psychology of double monsters, for these only figure here as examples of the deviations of physical personality, I

* For further details, see the work cited, vol. iii, p. 90, and following.

shall only recall the recent case of Millie and Christina, in whom the sensibility of the lower limbs is common : the two spinal cords, consequently, must form a true commissure at the plane of the point of union.

The civil and ecclesiastical laws, which are interested in this problem under several heads, (questions of civil condition, marriage, right of succession, baptism, etc.,) have never hesitated to acknowledge two persons where two distinct heads existed ; and justly so, although in practice perplexing cases might arise. The head in man being the true seat of personality, the locality in which the synthesis is effected, (we shall see later on that lower down in the animal scale this point is more doubtful,) it may be said, upon the whole, to represent the individual. But, if the question is discussed scientifically, it is impossible in double monsters to consider each individual as complete.

I shall not weary the reader with useless comments, since the facts speak for themselves. If he will carefully examine the preceding pages, he will convince himself that, even where the personalities are the most distinct, there exists an interpenetration of organs and functions such that each cannot be itself except on condition of being more or less the other, and of being conscious of the fact.

The ego, therefore, is not an entity acting where and as it chooses ; controlling the organs at its fancy, and restricting its domain at its pleasure. On the contrary, it is a resultant, to such a degree that its domain is determined by the anatomical connexions with the brain, and that at one time it represents an entire body, less an undivided part, and at another time the half of a body, and in parasitic monsters a domain so lim-

ited, that it is insufficient to support life, and is accordingly expelled.

IV.

To prove again and differently that the principle of individuation is the organism ; that it is such without restriction, immediately by the organic sensations, mediately by the affective and intellectual states, of which we shall speak later : let us examine what takes place in twins. Psychology has not occupied itself more with twins than with double monsters ; but the biologists furnish some curious data.

In the first place, let us recall that the proportion of twins in all births is about 1 in 70. Triplets or quadruplets are very rare, not more than 1 in 5000 and 1 in 150,000 respectively, so that their discussion would uselessly complicate our researches. Let us further remember that twins are of two kinds. Either they are germinated each from a separate ovule, in which case they may be of the same or of a different sex, or they may have sprung from two germinal spots in the same ovule, in which case they are enveloped within the same membrane and are invariably of the same sex. The latter case alone yields two personalities that are rigorously comparable.

Leaving aside animals, let us consider man, and attack the problem in all its complexity. It is evident, that since the physical and moral condition of the parents is the same for both twin individuals, at the moment of procreation, one cause of difference is thus eliminated. As their development has for its point of departure the materials of the same fecundated ovule, there is great likelihood of extreme resemblance in physical constitution, and consequently, according to

our thesis, in mental constitution. Let us now look at the facts in our favor ; afterwards we shall consider objections and exceptions.

The perfect resemblance of some twins is a matter of common observation. Since antiquity this topic has furnished material for the comic poets, and in later times it has been more than once used by novelists. But writers usually have confined themselves to external resemblances : stature, form, face, voice, etc. There are, however, many deeper ones. Physicians have long remarked that the majority of twins exhibit extraordinary agreement of tastes, aptitudes, faculties, and even of destinies. Recently Mr. Galton has made an investigation of this subject, issuing circulars of inquiry, to which about eighty answers were returned, thirty-five with minute details. Mr. Galton's aim was totally different from ours. Extending his researches on heredity, he wished to determine by a new method the respective parts played by nature and education ; but among his materials there is much that is of great value to us.*

Mr. Galton reports a number of anecdotes similar to those which have been long current : a sister taking two music-lessons daily, to gain for her twin sister a holiday ; the perplexities of a certain college porter, who, when a twin came to see his brother, did not know which of the two he ought to allow to depart, etc. Others show a persistent resemblance under circumstances little favorable to preserve it. "A was again coming home from India, on leave ; the ship did not arrive for some days after it was due ; the twin brother

* They will be found under the caption "History of Twins" in his book *Inquiries into Human Faculty and Its Development* (pp. 216-242), London: Macmillan, 1883.

B had come up from his quarters to receive A, and their old mother was very nervous. One morning A rushed in saying, 'Oh, mother, how are you?' Her answer was, 'No, B, it's a bad joke; you know how anxious I am!' and it was a little time before A could persuade her that he was the real man." (P. 224.)

But cases which relate to mental organisation have a higher interest for us. "A point which illustrates the extremely close resemblance between twins," says Galton, "is the similarity in the association of their ideas. No less than eleven out of the thirty-five cases testify to this. They make the same remarks on the same occasion, begin singing the same song at the same moment, and so on; or one would commence a sentence, and the other would finish it. An observant friend graphically described to me the effect produced on her by two such twins whom she had met casually. She said: 'Their teeth grew alike, they spoke alike and together, and said the same things, and seemed just like one person.' One of the most curious anecdotes that I have received concerning this similarity of ideas was that one twin, A, who happened to be at a town in Scotland, bought a set of champagne glasses which caught his attention, as a surprise for his brother B; while at the same time B, being in England, bought a similar set of precisely the same pattern, as a surprise for A. Other anecdotes of a like kind have reached me about these twins." (P. 231.)

The nature and evolution of physical and mental maladies also furnish some very cogent facts. If the latter alone interest psychology, the former reveal a similarity in the innermost constitution of the two organisms which sight cannot discover in the form of external resemblances.

"I attended two twin-brothers," says Trousseau, "so marvellously alike, that it was impossible to tell which was which without seeing them side by side. But their physical resemblance extended still deeper; they had, so to speak, a pathological resemblance even more remarkable. One of them, whom I saw in Paris, while suffering from rheumatic ophthalmia, said to me: 'At this instant my brother must be suffering from an ophthalmia exactly like mine.' And as I scouted the idea, a few days afterwards he showed me a letter that he had just received from his brother, then at Vienna, who wrote: 'I have got my ophthalmia, you must have yours.' Singular as this story may appear, it is none the less a fact. It was not told to me, but I saw it myself, and I have observed other analogous cases in my practice." * Galton gives several examples, of which we shall cite only one: "Two twin-brothers, closely alike, singularly attached to each other, and having identical tastes, had both obtained government clerkships, and kept house together; one of them sickened of Bright's disease and died of it; the other sickened of the same disease and died seven months later." (P. 226).

We might fill pages with analogous cases. In the order of mental diseases it is the same; a few examples will suffice. Moreau (de Tours) records a case of twins, physically alike, who were attacked by insanity. In both patients "the dominant ideas are absolutely the same. Both believe themselves to be the objects of imaginary persecutions. The same enemies have sworn their ruin, and employ the same means to accomplish their ends. Both are subject to hallucinations of hearing. They talk to no one, and they refuse

* Trousseau, *Clinique Médicale*, "Leçon sur l'asthme," vol. i, p. 253.

to answer questions. They always keep apart, and never communicate with each other. An extremely curious fact that has been frequently observed by the attendants of the ward and also by ourselves is the following: from time to time, at irregular intervals, of two, three, or several months, without apparent cause and by an entirely spontaneous caprice of their malady, a very marked change takes place in the condition of the two brothers. Both, at the same period, and often on the very same day, emerge from their habitual stupor and prostration; they make the same complaints and imperiously demand of the physician their release. I have seen this strange phenomenon take place even when they were separated from each other by a distance of several miles; the one being at Bicêtre, while the other was at Sainte-Anne."*

More recently the *Journal of Mental Science*† has published two observations of insanity in twins, where we see two sisters who resembled each other so closely in features, manners, language, and intellectual disposition, "that it would be very easy to mistake one for the other," and who, placed in different wards of the same asylum, with no possibility of seeing each other, presented exactly the same symptoms of mental alienation.

But we must forestall here certain objections. There are twins of the same sex that are unlike; and although the statistics do not tell us in what proportion true twins (issues of the same ovule) present these differences, it is sufficient if it takes place only in a single

* *Psychologie morbide*, p. 172. We also find an extraordinarily curious case in the *Annales médico-psychologiques*, 1863, vol. i, p. 312. On the subject of twins the special work of Kleinwaechter, *Die Lehre von den Zwillingen*, Prague, 1871, may be consulted.

† April, 1883, and Ball, *De la folie gémellaire*, in *L'Encéphale*.

case to be worthy of discussion. Elsewhere* we have enumerated the numerous causes which in every individual from conception till death tend to produce variations, that is, certain marks which are peculiar to the individual, and which differentiate it from every other. Here, as we have said, one class of causes must be eliminated: those which come immediately from the parents. But the impregnated ovule also represents ancestral influences—4, 12, 28 possible influences according as we ascend to grandparents, great-grandparents, great-great-grandparents, etc. We can know only from experience which of them prevail, and in what degree. True, in the present case, it is the same ovule which goes to produce the two individuals; but nothing proves that everywhere and always the division made between the two is rigorously equivalent in quantity and quality of materials. The eggs of all animals not only exhibit the same anatomical structure, but chemical analysis can only reveal in them infinitesimal differences; yet, the one produces a sponge, the other a man. This apparent resemblance must conceal, accordingly, profound differences, although it escapes our subtlest means of investigation. Do they spring from the character of the molecular movements, as some authors think? We may assume anything we please, provided we thoroughly understand that the egg itself is already a complex thing, and that the two individuals that come from it cannot be absolutely similar. Our perplexity springs only from our ignorance of the processes according to which the primitive elements arrange themselves to constitute each individual, and in consequence, of the physical and psychological differences which thence result. Some of Galton's

* *L'hérédité psychologique*, 2nd edition, part, ii, ch. iv.

correspondents have reported the curious fact of certain twins who were "complementary to each other." "There seemed to be," writes the mother of the twins, "a sort of interchangeable likeness in expression that often gave to each the effect of being more like his brother than himself."—"A fact struck all our school contemporaries (writes a senior wrangler of Cambridge) that my brother and I were complementary, so to speak, in point of ability and disposition. He was contemplative, poetical, and literary to a remarkable degree. I was practical, mathematical, and linguistic. Between us we should have made a very decent sort of a man." (Pp. 224 and 240.) The physical and mental capital seems to have been divided between them not by equality but by equivalence.

If the reader will carefully consider how complex the psychic organisation is in man; how improbable it is, by reason of this complexity, that two persons should be the repetition of each other, although twins approach that point to an astonishing degree; he will be irresistibly led to conclude, that a single well-verified fact of this kind proves more than ten exceptions, and that the moral resemblance is only the correlative of the physical resemblance. If, by an impossible hypothesis, two men were so created that their two organisms were constitutionally identical; that their hereditary influences were rigorously alike; if, by a still greater impossibility, both received at the same instant the same physical and moral impressions, there would be no other difference between them than that of their position in space.

As the organism, so the personality! In closing this chapter, I feel somewhat ashamed of having accumulated so many data and proofs to establish a truth

so evident to my eyes as that just formulated. I should have greatly hesitated to do so, if it had not been too easy to show that this truth has been forgotten and ignored rather than denied ; and that writers have almost always rested content with mentioning it under the vague rubric of the influence of the physical on the mental.

The facts hitherto studied cannot alone lead to a conclusion : they only pave the way to it. They have shown that, reduced to its last elements, physical personality presupposes the properties of living matter and their co-ordination ; that just as the body is only the organised and co-ordinated sum of all the elements that constitute it, so also the physical personality is only the organised and co-ordinated sum of the same elements as psychic factors. It expresses their nature and dispositions, nothing more. The normal state, teratological cases, the resemblance of twins have proved it. The aberrations of the physical personality, or as M. Bertrand ingeniously calls them,* “the hallucinations of the sense of the body” supply an additional mass of evidence. But there are deviations of the human person arising from other causes and produced by a more complicated mechanism, which we will now proceed to investigate.

**De l'aperception du corps humain par la conscience*, p. 269 et seqq.

CHAPTER II.

AFFECTIVE DISORDERS.

I.

AT THE outset, we must remind the reader, once for all, (and this applies also to the intellectual disorders,) that we are still continuing our study of organic conditions, only under a different form. The desires, feelings, passions, that impart to character its fundamental tone, have their roots in the organism and are predetermined by it. The same is true also of the highest intellectual manifestations. Still, as the psychic states here play a preponderating part, we shall treat them as the immediate causes of the changes of personality, without forgetting, however, that these causes are in their turn effects.

Without pretending to give a rigorous classification of the affective manifestations, which it is not our purpose to study in detail, we shall reduce them to three groups, of which the psychological complexity increases and the physiological importance decreases. They are: (1) the tendencies connected with the preservation of the individual (nutrition, self-defence); (2) those relating to the preservation of the species; (3) the highest of all, those which presuppose the development of intelligence (moral, religious, æsthetic, and scientific manifestations, ambition in all its forms,

etc.). If we consider the development of the individual, we shall find that it is in this chronological order that the sentiments appear. We see it still better in the evolution of the human species. Inferior human races—with whom education does not correct nature by supplying the accumulated results of the labor of centuries—never pass beyond the preservation of the individual and of the species, or at most exhibit only a slight trace of the sentiments belonging to the third group.

The affective states connected with nutrition are in the early infancy of the child the only elements, so to speak, of its nascent personality. Thence arise comfort and discomfort, desires and aversions. It is the sense of the body, of which we have so much spoken, arrived at its highest psychic expression. Natural causes, too manifest to need enumeration, make nutrition predominate almost exclusively in the child; it has, and can only have, a personality almost entirely nutritive, that is, the most indefinite and lowest form of personality. The ego, for him who does not regard it as an entity, can here only be a compound of extreme simplicity.

As we get away from infancy, the preponderating rôle of nutrition diminishes; but it never completely loses its rights, because of all the properties of the living animal it alone is fundamental. Accordingly, grave alterations of personality are connected with its variations. If it diminishes, the individual feels depressed, weakened, contracted; if it is increased, he feels stimulated, strengthened, extended. Of all the functions whose harmony constitutes this basic property of life, the circulation seems to be that of which sudden variations have the greatest influence on the affective states

and are betrayed by immediate results; but let us leave conjectures of detail to take a look at the facts.

In the states known as hypochondria, lypemania, melancholia (in all its forms), we find alterations of personality that admit of all possible degrees, including even complete metamorphosis. Among these different morbid states physicians have established certain clinical distinctions, which are of no importance here. We can comprise all in a single description. What is found is a feeling of fatigue, oppression, anxiety, dejection, sadness, absence of desires, permanent lassitude. In the most serious cases, the source of the emotions is completely dried up: "The patients have become insensible to everything. They no longer have affection either for their parents or their children, and even the death of persons that are dear to them leaves them perfectly cold and indifferent. They cannot weep, and nothing moves them except their own sufferings."* As to the activity, there is torpor, incapacity to act or even to will, an insurmountable inaction that will last for hours, in a word, that "abulia" (lack of will) of which we have studied all the forms in treating of the diseases of the will.† As for the external world, the patient, without having hallucinations, finds his relations to it changed. It seems as if his habitual sensations had lost their true character. "All that surrounds me," said one of them, "is still as formerly, and yet some change must have taken place; things still have their old forms, I see them perfectly well, and yet they have changed much." One of Esquirol's patients complains that his existence is incomplete.

* Falret, *Archives générales de médecine*, December, 1878.

† *The Diseases of the Will*, Chicago, The Open Court Publishing Company 1894.

"Each of my senses, each part of myself, as it were, is separated from me and can no longer give me sensations; it seems to me as if I never actually reach the objects that I touch." That state, due sometimes to cutaneous anæsthesia, may reach a point "where it seems to the patient that the real world has completely faded away, or is dead, and that there only remains an imaginary world, in which he is afraid to dwell."* To this picture are to be added physical phenomena: troubles of the circulation, of the respiration, and of the secretions. The emaciation of the subjects may be considerable, and the weight of the body diminish rapidly during the period of depression. The respiratory function is slackened, the circulation reduced, and the temperature of the body lowered.

Gradually these morbid states take form, organise and unify themselves in some false conception, which—having been excited by the psycho-physiological mechanism of association—becomes in its turn a centre of attraction toward which all converges. One patient will say that his heart is petrified, another that his nerves are like burning coals, etc. These aberrations assume innumerable forms, and vary with individuals. In extreme cases, the individual doubts his existence, or denies it. A young man, who maintained that he had been dead for two years, expressed his perplexity as follows: "I exist, but outside the real material life and in spite of myself, nothing having killed me. Everything in me is mechanical, and is done unconsciously." Is not this contradictory situation, in which the subject claims to be alive and dead at the same time, the logical and natural expression of a state in

* Griesinger, *Traité des maladies mentales* (Fr. trans., p. 265); *L'Encéphale*, June, 1882.

which the old ego and the new, vitality and annihilation are equilibrated?

Besides, the psychological interpretation of all these cases is not doubtful. What we have are organic disturbances, the first result of which is to depress the faculty of feeling in general, and the second to pervert it. In this way a group of organic and psychic states is formed that tend to modify the constitution of the ego to its very depths, because they do not act after the fashion of sudden emotions, the effect of which is violent and superficial, but by slow, silent actions of unconquerable tenacity. At first this new mode of existence seems strange to the individual, and outside its ego. But by degrees and by habit, the new feeling gets a lodging in and becomes an integral part of the ego, changing its constitution, and when of a powerful nature, wholly transforming it.

In seeing how the ego is dissolved, we discover how it is made. In most instances, doubtless, the alteration is only partial. The individual, though grown different to himself, and to those who know him, still preserves a certain residuum of himself. In fact, complete transformation can only be rare; and be it observed, that when a patient maintains that he is changed or transformed, he is right, notwithstanding the denials or hilarity of his friends. It is impossible for him to feel himself differently, as his consciousness is simply the expression of his organic state. Subjectively he is not the sport of an illusion; he is merely what he ought to be. On the other hand, it is the unconscious, unavowed hypothesis of an independent ego, existing by itself as an unalterable entity, that urges us instinctively to think that this change is only an external event, an unusual or ridiculous garb in which the per-

sonality is dressed, while in reality the change is internal, and implies certain losses and acquisitions in the very substance of the ego.

The counterpart of these partial alterations of the ego is to be found in cases where the ego is exalted, amplified, and lifted above its normal tone. Instances of this are found at the beginning of general paralysis, in some cases of mania, and in the period of excitement of circular insanity. It is exactly the reverse of the previous picture. A feeling of physical and moral well-being exists, superabundant strength, exuberant activity, venting itself with reckless prodigality in speeches, projects, enterprises, and incessant, fruitless journeys. To this superexcitation of the psychic life corresponds a superactivity of all the organic functions. Nutrition increases—often in an exaggerated manner—respiration and circulation are quickened, the genital function is exalted ; and notwithstanding a great expenditure of force the individual feels no fatigue. Afterwards these states group and unify themselves, in the end considerably transforming the ego. One individual feels herculean strength, is able to lift prodigious weights, procreate thousands of children, race with a railway-train, etc. Another is an inexhaustible mine of learning, imagines himself a great poet, artist, or inventor. At times the transformation approaches still nearer to complete metamorphosis ; and then the subject, entirely overwhelmed by the feeling of his matchless power, proclaims himself pope, emperor, God. “The patient,” as Griesinger justly observes, “feeling proud, bold, and enlivened, discovering in himself unwonted freedom in his decisions, and feeling the superabundance of his thoughts, is led naturally to have ideas of grandeur, rank, riches, of great moral

or intellectual power, such as only the fullest liberty of thought and volition can exhibit in a like degree. This exaggerated idea of force and of freedom must nevertheless have a motive ; there must be in the ego something that corresponds to it ; the ego must have momentarily become different ; and the patient knows no other way of expressing this change, than by proclaiming himself Napoleon, the Messiah, or some other exalted personage." *

It would be a waste of time to show that this transformation of the ego, whether partial or complete, momentary or permanent, is of the same kind as in the preceding cases, and that it supposes the same mechanism, with the sole difference that here the ego is dissolved in the inverse sense—not by defect but by excess.

These alterations of the personality by increase or decrease, this metamorphosis of the ego, raising or lowering it, would be still more striking if they followed each other regularly in the same individual. Now, instances of this frequently occur in so-called circular insanity, or insanity of double form, a mental derangement characterised by a regular sequence of two periods, one of depression and one of excitement, accompanied in some patients with intervals of lucidity. Here, the following singular fact may be witnessed. Upon what might be called the primitive and fundamental personality, of which there still remain a few altered fragments, are grafted by turns two new personalities—not only quite distinct, but wholly excluding each other. It is indispensable here to give a résumé of some observations.†

*Op. cit., p. 333.

† They will be found *in extenso* in Ritti, *Traité clinique de la folie à double forme*. Paris, 1883, observations xvii, xix, xxx, xxxi.

A woman, observed by Morel, had been abandoned by her mother to a life of vice when fourteen years old. "Later in her career, a prey to every pang of shame and wretchedness, she had no other resource than to enter a house of ill-fame. A year afterwards she was rescued from it and placed in the convent of the Good Shepherd, at Metz. She remained here for two years, but the too intense reaction effected in her sentiments resulted in an outburst of religious mania, which was followed by a period of profound stupidity." Then, while under the treatment of the physician, she passes through alternate periods, when she imagines herself by turns a prostitute and a nun. On issuing from the period of stupidity, "she sets to work methodically and speaks with propriety; but she arranges her toilet with a certain coquetry. Then this tendency increases, her eyes sparkle, her glances grow lascivious, she dances and sings. Finally the obscenity of her utterances and her erotic solicitations necessitate her solitary confinement. She gives herself the name of Mme. Poulmaire, and furnishes the most cynical details of her former state of prostitution." Then again, after a period of depression, "she becomes meek and timid; and evinces the most scrupulous decency in her demeanor. She arranges her toilet with extreme severity. The intonation of her voice is peculiar. She speaks of the convent of the Good Shepherd at Metz and of her desire to return there; she now calls herself Sister Martha of the Five Wounds, Theresa of Jesus, Sister Mary of the Resurrection. She refrains from speaking in the first person: says to the sisters, Take *our* dress, this is *our* pocket-handkerchief. Nothing now belongs to her personally (according to the rule of Catholic

convents). . . . She sees angels who smile upon her, and has moments of ecstasy."

In another case reported by Krafft-Ebing, a neuro-pathic patient of insane parentage, "during the period of depression was disgusted with the world, preoccupied with the thought of approaching death and of eternity, and in this condition thought of becoming a priest. During the maniacal periods he is turbulent, studies furiously, will not hear a word more about theology, and only thinks of practising medicine."

An insane woman of Charenton, of a very distinguished and highly gifted mind, would change "from day to day in person, condition, and even in sex. At one time she would be a princess of royal blood, betrothed to an emperor; at another time a woman of the people and democratic; to-day married and *enceinte*; to-morrow once more a maiden. It would even come upon her at times to be a man; and one day she imagined herself a political prisoner of importance, and composed verses upon the subject."

Finally, in the following case we find the complete formation of a second personality. "A lunatic, an inmate of the asylum at Vanves," says Billod,* "every eighteen months about, would let his beard grow and present himself, altered in dress and manners, to the whole house as a lieutenant of artillery, named Nabon, recently arrived from Africa, to act as a substitute for his brother. He would say, that before leaving, his brother had given him all the requisite information about every one; and at his arrival he would ask and obtain the honor of being introduced to each person. The patient would then remain for several months in a state of marked exaltation, adapting his whole conduct

**Annales médico-psychologiques*, 1858, according to Ritti, op. cit., p. 156.

to his new individuality. At the expiration of a certain time, he would announce the return of his brother, who, as he said, was in the village and would come to replace him. Whereupon he would have his beard shaved off, change his dress and manner, and resume his real name. But he would then exhibit a marked expression of melancholy, walking along slowly, silent and alone, usually reading the 'Imitation of Jesus Christ,' or the 'Fathers of the Church.' In this mental state—a lucid one perhaps, but one that I am far from considering normal—he would remain until the return of the imaginary Lieutenant Nabon."

The two first cases cited are simply an exaggeration, an extra augmentation, of what exists in the normal state. The ego of all of us is made up of contradictory tendencies: virtues and vices, modesty and pride, avarice and prodigality, desire for rest and craving for action, and of a host of others. In the ordinary state these opposite tendencies are balanced, or, at least, that which prevails is not without a counterpoise. But here, owing to perfectly determinate organic conditions, there is not even the possibility of equilibrium: one group of tendencies is hypertrophied at the expense of the antagonist group, which is atrophied; then a reaction takes place in the inverse sense, so that the personality, instead of consisting of those average oscillations of which each represents a side of human nature, passes constantly from one excess to the other. In passing, we may remark that these diseases of personality consist in a reduction to a simpler state. But the time is not come to dwell on this point.

II.

Nutrition being less a function than the fundamental property of all that lives, it follows that the tendencies and feelings connected with it have a very general character. This is not true of the preservation of the species. This function, connected with a determinate part of the organism, reveals itself by feelings of a very precise character. Hence, it is eminently fitted to verify our thesis. For, if personality is a compound, varying with its constituent elements, a change in the sexual instincts will change it, a perversion will pervert it, an inversion will invert it; and this is what happens.

In the first place, let us recall some well-known facts, the obvious conclusions of which are not generally drawn. At puberty, a new group of sensations, and, consequently, of emotions and ideas, are developed. This afflux of unaccustomed psychic states—stable, because their cause is stable, co-ordinate, because their source is co-ordinate—tends profoundly to modify the constitution of the ego. It feels undecided, tortured by a vague, latent discomfort, the cause of which is unknown; gradually these new elements of the moral life are assimilated by the old ego, enter into it, become a part of it, but at the same time make it different. The ego is changed; a partial alteration of the personality has been accomplished, the result of which has been to constitute a new type of character—the sexual character. This development of an organ and its functions, with their train of instincts, images, sentiments, and ideas, has produced in the neuter per-

sonality of the child a differentiation, has made of it a male or a female, in the complete sense. Up to this period there existed simply a ground-plan, by virtue of which, however, the change could be effected without a sudden shock, without a break between the past and the present, without a complete alteration of personality.

If we pass now from the normal development to the exceptions and the morbid cases, we find certain variations or transformations of the personality connected with the state of the genital organs.

The effect of castration upon animals is well known. It is not less marked in man. Apart from a few exceptions (some of which are historical), eunuchs represent a deviation from the psychic type. According to Maudsley, they are said to be cowardly, envious, liars, utterly deceitful, destitute of social and moral feeling, mutilated in mind as in body.* Whether this moral degradation results directly from castration, as some authors maintain, or indirectly from a dubious social position, matters little for our thesis: direct or indirect, the cause remains the same.

In hermaphrodites, experience corroborates what might have been predicted *a priori*. With the appearances of one sex they present some of the characteristics of the other; but, far from combining both functions, they exhibit only incomplete organs, usually destitute of sexual ability. Their moral character is sometimes neuter, sometimes masculine, and sometimes feminine. Abundant examples of this are found in writers who have studied the question.† "Sometimes the hermaphrodite, after showing a lively incli-

* *The Physiology of Mind*, p. 372.

† For the facts, see Isid. Geoffroy Saint-Hilaire: *Histoire des anomalies*, v. ii. p. 65 et seq. Tardieu and Laugier, *Dictionnaire de médecine*, art. "Hermaphrodisme," etc.

nation for women, exhibits, upon the descent of the testicles, completely opposite instincts." In a recent case observed by Dr. Magitot, an hermaphrodite woman evinced alternately very pronounced feminine and masculine tastes. "In general, the affective faculties and the moral dispositions suffer the countereffect of the faulty conformation of the organs." Still, as Tardieu adds, "it is only fair to ascribe much of this alteration of character to the influence of habits and occupations which the mistake made as to their real sex has forced upon the individuals. Some males, from the first, dressed, educated, employed, and even married as women, retain the thoughts, habits, and manners of women. Such was the case of Maria Arsano, who died at the age of eighty, and who in reality was a man, but whose character had been effeminised by her habits."

It is not my purpose here to review the perversions or aberrations of the sexual instinct,* each of which stamps its mark upon the personality, and affects it little or much, transiently or permanently. As the close of these partial alterations, we have the total transformation, the change of sex. There are numerous examples of this: the following may serve as a type. Lallemand relates "the fact of a patient, who believed himself a woman, and used to write letters to an imaginary lover. At the autopsy it was discovered that hypertrophy with induration of the prostate gland and impairment of the ejaculatory ducts had taken place." It is probable that in many cases of this kind perversion or abolition of the sexual sensations has occurred.

* For the complete exposition of this question see the article of Dr. Gley "Sur les aberrations de l'instinct sexuel," in the *Revue philosophique* for January, 1884.

I must, however, point out a few exceptions. Several detailed observations, (they may be found in Leuret, "*Fragments psych.*," p. 114 et seqq.) show us individuals, who assume the carriage, habits, voice, and when they can, the dress of the sex they imagine themselves to belong to, yet do not exhibit any anatomical or physiological anomaly of the sexual organs. In such cases the starting-point of the metamorphosis must be elsewhere. This can only be in the cerebro-spinal organ. In fact, it is to be noted, that all that has been said of the sexual organ as making up or modifying the personality must not be understood simply of that organ itself as limited to its anatomic conformation; it includes also its connexions with the brain, where it is represented. Physiologists place the genito-spinal reflex centre in the lumbar region of the cord. From this centre to the brain, all is dark; for the hypothesis of Gall, who makes the cerebellum the seat of physical love, notwithstanding a few favorable observations of Budge and of Lussana, has not been widely accepted. But be our ignorance on this point what it may, plainly the sexual impressions must reach the brain, for they are felt, and there are centres there whence the psychic incitations are transmitted to the sexual organs, to set them in action. These nerve-elements, whatever be their nature, number, or seat, whether localised or diffused, are the cerebral, and consequently the psychic, representatives of the sexual organ; and as in creating one particular state of consciousness, they usually excite others, there must needs exist an association between this group of psycho-physiological states and a certain number of others. The conclusion to be drawn from the above-cited cases is that a cerebral disturbance of unknown

nature is produced, (a woman believing herself a man, a man believing himself a woman,) the result of which is a fixed and erroneous state of consciousness. This fixed, exclusively predominant state thereupon produces almost automatic natural associations, which are, as it were, its radiations (feelings, carriage, language, dress of the imaginary sex): it tends to complete itself. It is a metamorphosis which proceeds from above, and not from below. We have here an example of what is called the influence of the mental upon the physical; and we shall try to show further on that the ego discussed by the majority of psychologists, (it is not here a question of the real ego,) is formed by an analogous process. But these cases belong to the *intellectual* deviations of the personality, of which we shall speak in the next chapter.

Before quitting this subject, I should like to notice a few facts which are difficult to explain, but which cannot be seriously advanced against us. I allude to the singular phenomenon called "opposite sexuality," or "sexual perversion," which has been much discussed of late, and which it will suffice to mention in a few words. Certain patients observed by Westphal, Krafft-Ebing, Charcot and Magnan, Servaës, Gock,* etc., exhibit a *congenital* inversion of the sexual instinct, whence results, notwithstanding a normal physical constitution, an instinctive and violent attraction for persons of the same sex, with a marked repulsion for the opposite sex; briefly, "a woman is physically a woman and psychically a man, a man is physically a man and psychically a woman." Such facts are in complete disaccord with all that logic and experience teach

*Charcot and Magnan, *Archives de Neurologie*, 1882, Nos. 7 and 12; Westphal, *Archiv für Psychiatrie*, 1870 and 1876; Krafft-Ebing, *ibid.*, 1877, etc.

us. The physical and the mental contradict each other. Strictly speaking, those who make of the ego an entity might avail themselves of these anomalies, and assert that they prove its independence, its autonomous existence. But that would be a great illusion, for their reasoning would rest upon two very fragile foundations: upon facts which are very uncommon, and upon our present difficulty in explaining them. Nobody will deny that the cases of opposite sexuality represent an infinitely small fraction of the totality of the cases furnished by experience. By their rarity they are exceptions; by their nature, a psychological monstrosity. Still, monstrosities are not miracles, and we should know whence they come.

We might venture several explanations, which usually means that none is competent. I shall spare the reader. Psychology, like every other science, must submit to provisory ignorance on many points, and not be afraid to confess it. In this respect it differs from metaphysics, which undertakes to explain everything. Scientists who have studied these singular creatures from the point of view of medicine, regard them as degenerated beings. What we should like to know is, why this degeneration should have taken this particular form and not another. It is probable that the clearing up of this mystery must be sought for in the multiple elements of heredity, in the complicated play of the conflicting male and female influences; but I shall leave this task to more clear-sighted and fortunate individuals. Setting aside the question of causes, it is impossible to refuse to admit an aberration of the cerebral mechanism, as in the cases of Leuret and their analogues. However, the influence of the sexual organs upon the nature and formation of

character is so little contested that to dwell longer upon the subject would be loss of time, while a hypothetical explanation of opposite sexuality would not in the least advance our researches.

III.

The instincts, desires, tendencies, and sentiments connected with the preservation of the individual and of the species have their perfectly determinate material conditions—the first in the totality of the organic life, the second in a particular organ. But when we pass from the primitive and fundamental forms of the affective life to those that are of secondary formation, born later in the course of evolution (social, moral, intellectual, æsthetic tendencies), besides the impossibility of assigning to them their immediate organic bases—a fact which renders our path uncertain—we observe that they have not even the same degree of generality. With the exception, perhaps, of the moral and social tendencies, none of them expresses the individual in its totality; they are partial, they represent only a single group in the *ensemble* of its tendencies. Hence no one of them has by itself the power of producing a metamorphosis of the personality. So long as that habitude which we call the feeling of the body, and that other habitude which is memory, do not enter into play, a complete transformation does not take place: the individual may change, but it cannot become another.

Still, these variations, even though partial, have their interest. They show the transition from the normal to the morbid state. In studying the diseases of the will, we found in ordinary life many prefigurements

of the gravest forms. Here, likewise, common observation shows us how little the normal ego is endowed with cohesion and unity. Leaving apart characters that are perfectly consistent, (in a rigorous sense of the word they do not exist,) there are in every one of us tendencies of all sorts, all kinds of possible contradictions, and among these contradictions, all kinds of intermediate shades, and among those tendencies all possible combinations. This is because the ego is not solely a memory, a storehouse of recollections connected with the present, but an aggregate of instincts, tendencies, desires which are simply the activity of its innate and acquired constitution. To use expressions in vogue, we might say the memory is the static ego, the group of tendencies the dynamic ego. If, instead of being guided unconsciously by the conception of an ego-entity,—a prejudice that has been strengthened in us by education and the supposed evidence of consciousness,—we should consent to take it as it is, to wit, as a co-ordination of tendencies and psychic states, the proximate cause of which is to be sought in the co-ordination and consensus of the organism, we should no longer be surprised at these oscillations,—incessant in flighty characters, but rare in steady ones,—which, for a long, a short, or even an almost imperceptible space of time, show us the person in a new light. An organic state, an external influence strengthen a tendency; this then becomes a centre of attraction toward which converge the states and tendencies that are directly associated with it; thereupon the associations gradually expand: the centre of gravity of the ego is displaced, and the personality has become another. “Two souls,” said Goethe, “dwell within my breast.” Only two! If moralists, poets, novelists, dramatists

have shown us to satiety these two egos in a state of conflict within the same ego, common experience is still richer; it shows us several, each excluding the others, as it advances to the front. This may be less dramatic, but it is truer. "Our ego at different epochs is very different: according to age, the various duties and events of life, and the excitations of the moment, certain complexes of ideas, at a given moment representing the ego, are more strongly developed than the others and take the first place. We become another and are yet the same. My ego as a physician, as a scientist, my sensual ego, my moral ego, etc., that is, the complexes of ideas, inclinations, and directions of the will designated by these terms, may at a given moment enter into mutual combat and repel each other. The consequence of this state of things would be, not only inconsistency and division of thought and will, but also a complete absence of energy for each of these isolated phases of the ego, if, in all these spheres there was not a more or less clear repetition for consciousness of some of these fundamental directions."* The orator, master of his words, who while speaking is his own critic, the actor watching himself play, the psychologist studying himself, are additional examples of this normal division of the ego.

Between these momentary and partial transformations, whose commonness conceals their importance as psychological documents, and the serious states, of which we shall speak, there are intermediate variations, more constant, more profound, or both. The dipsomaniac, for example, has two alternate lives; in the

* Griesinger, *Traité des maladies mentales*," French trans. of Doumic, p. 55. See also the excellent study by M. Paulhan on "The variations of personality in the normal state," June, 1882, in the *Revue philosophique*.

one he is sober, methodical, industrious ; in the other he is entirely swayed by his passion, improvident, disorderly, dissipated. Have we not here, as it were, two incomplete and opposite individuals welded together so as to form a common trunk ? The same is true of persons subject to irresistible impulses, who insist that some alien power impels them to act in spite of themselves. Let us remember also those transformations of character that are accompanied by cutaneous anæsthesia, and which have been described by several alienists. One of the most curious of these cases was observed by Renaudin. A young man whose conduct had always been exemplary suddenly abandons himself to tendencies of the worst kind. In his mental condition it was impossible to discover any symptom of evident alienation, but examination showed that the entire surface of his skin had become absolutely insensible. The cutaneous anæsthesia was intermittent. "As soon as it ceases, the inclinations of the young man are entirely different ; he is docile, affectionate, and understands thoroughly the painful character of his condition. When it again manifests itself, the resistless power of the worst inclinations is its immediate consequence, and we have proof that it could proceed as far as murder." Maudsley reports certain analogous cases of insanity in children, which suggested to him the following reflexions : "The special defective sensibility of skin in these cases is full of instruction in relation to the profound and general defect or perversion of the sensibility or receptive capacity of the whole nervous system which is shown in their perverted likings and dislikes, in their inability to join with other children in play or work, and in the impossibility to modify their characters by discipline ; they cannot feel impressions

as they naturally should feel them nor adjust themselves to their surroundings, with which they are in discord ; and the motor outcomes of the perverted affections of self are accordingly of a meaningless and destructive character. The insensibility of skin is the outward and visible sign of a corresponding inward and invisible defect, as it notably is also in idiocy." *

We revert, inevitably, to the organism. But this review we have made of facts of every kind, monotonous as it may seem, shows us the variations of personality in all its aspects. As there are no two cases identical, each case presents a particular decomposition of the ego. The last cases show us a transformation of character without lesion of memory. As we progress in our review of the facts, one conclusion appears, as it were, of itself ; it is that *personality results from two fundamental factors, the constitution of the body with the tendencies and sentiments that manifest it, and the memory.*

If (as above) only the first factor is modified, a momentary dissociation results, followed by a partial change of the ego. If the modification is so serious that the organic bases of memory suffer a sort of paralysis, from which they cannot revive, then the disintegration of the personality is complete: there is no longer a past, and there is a different present. Then a new ego is formed, usually unaware of the former ego. Of these we have several examples, so well known, that I shall simply mention them: the American lady of Macnish, the case of Dr. Azam (Félida), and the case of Dr. Dufay.† Owing to their generality

* Maudsley, *Pathology of Mind*, p. 287; Moreau (de Tours), *Psychologie morbide*, p. 313; Rendu, *Des anesthésies spontanées*, pp. 60-67.

† For complete observations, see Taine, *De l'intelligence*, v. i, p. 165; Azam *Revue scientifique*, 1876, 20th May and 18th September, 1877, 10th November, 1879, 8th March; and Dufay *ibid.*, 15th July, 1876. As to the part played by

these cases do not come under any special division, and we have no reason for mentioning them here rather than elsewhere, except to remark, that the transition from one personality to another is always accompanied by a change of character, undoubtedly connected with the unknown organic change which dominates the whole situation. This change is distinctly and repeatedly pointed out by Dr. Azam: his patient during one period is gloomy, cold, reserved; in the other gay, unreserved, buoyant to the verge of turbulence. This change is still greater in the following case, which I shall report more fully, because it is recent and little known.*

The subject is a young man of seventeen years, V . . . L . . . , affected with hysterical epilepsy, who entirely lost the memory of one year of his existence, and during the period of forgetfulness totally changed his character.

Born of an unmarried mother, who was "addicted to an open life of debauchery, and of an unknown father, he began to roam and beg on the streets as soon as he could walk. Later he became a thief, was arrested, and sent to the reformatory of Saint-Urbain where he did some field-work." One day being occupied in a vineyard he happened to lay his hands upon a serpent, hidden in a fagot of twigs. The boy was terribly frightened, and in the evening, on returning to the reformatory, became unconscious. These crises were repeated from time to time, his legs grew weak, finally a paralysis of the lower limbs set in, his intellect remaining unimpaired. He was thereupon trans-

the memory in these pathological cases I refer the reader to my work *Les maladies de la mémoire*, p. 76 and following.

*This observation of Dr. Camuset is found *in extenso* in the *Annales médico-psychologiques*, January, 1882.

ferred to the asylum of Bonneval. There it was reported "that the patient has an open and sympathetic expression, that his character is amiable, and that he shows himself grateful for the care that is bestowed upon him. He tells the history of his life in all its minutest details, even his thefts which he deplores, of which he is ashamed, and which he attributes to his forsaken condition and his comrades who led him into evil ways. He regrets very much what has happened, and declares that in the future he will be more honest. It was then decided to teach him a trade compatible with his infirmity. He can read and is learning to write. He is taken every morning to the tailors' shop, where he is placed upon a table and assumes naturally the classical position owing to the condition of his lower limbs, which are atrophied and contracted. In two months' time he learned to sew pretty well. He works with enthusiasm, and everybody is satisfied with his progress."

At this stage he is seized with an attack of hystero-epilepsy, which after fifty hours ends in a tranquil sleep. It is then that his old personality reappears.

"On awakening, V . . . wants to get up. He asks for his clothes, and is able to dress himself, but performs the operation in a very bungling manner; he then takes a few steps through the hall; his paraplegia having disappeared. His legs totter and with difficulty support the body because of the atrophy of the muscles. . . . When once dressed, he asks to go with his comrades into the vineyards to work. . . . We quickly perceive that our subject still believes himself at Saint-Urbain, and wishes to resume his habitual occupations. In fact, he has no recollection of his crisis and recognises nobody, the physicians and attendants no more

than his companions of the ward. He does not admit having been paralysed and accuses those about him of teasing him. We thought of temporary insanity, which was very likely after so severe an attack of hysteria, but time passes and still his memory does not return. V . . . remembers very distinctly that he had been sent to Saint-Urbain ; he knows that 'the other day' he was frightened by a serpent ; but from that time all is oblivion. He remembers nothing more, and has not even the feeling of the time elapsed.

"It was thought that he might be simulating, as hysterical patients often do, and we employed all means to make V . . . contradict himself, but without success. Thus, without letting him know where he is going, we have him taken to the tailors' workshop. We walk by his side, and take care not to influence him as to the direction to be taken. V . . . does not know whither he is going. On arriving at the shop he has every appearance of a person who does not know where he is, and he declares that he has never been there before. He is given a needle and asked to sew. He sets about the task as awkwardly as a man who performs a job of this kind for the first time. They show him some clothes, the seams of which had been sewn by him, during the time he was paralysed. He laughs and seems to doubt, but finally inclines to our observations. After a month of experiment and trials of all kinds, we are convinced that V . . . really remembers nothing."

One of the most interesting points of this case is the modification that the character of the patient underwent, which was a return to his early life and to his hereditary antecedents: "He is no longer the same subject ; he has become quarrelsome and is a glutton ;

he answers impolitely. Formerly he did not like wine and usually gave his share to his companions ; but now he steals theirs. When they tell him that he once committed thefts, and caution him not to begin again, he becomes arrogant and will say, 'if he did steal, he paid for it, as they put him into prison.' They employ him in the garden. One day he escapes, taking with him sixty francs and the effects of an attendant of the infirmary. He is recaptured five miles from Bonneval, at the moment when, after selling his clothes to purchase others, he is on the point of boarding the railway train for Paris. He resists arrest, and strikes and bites at the wardens sent in search of him. Brought back to the asylum, he becomes furious, cries, rolls on the ground ; finally it is necessary to confine him in a solitary cell."

Dismissed from the asylum, after many peregrinations he is taken to Bicêtre, escapes, and enlists in the Marine Corps at Rochefort. Convicted of stealing, he is confided, at the end of a violent attack of hysteropilepsy, to the care of Messrs. Bourru and Burot, who have studied him with great care. With the help of physical methods of transference (steel, soft iron, magnet, electricity), they obtained in their subject the six following states : *

First state. Hemiplegia and hemianæsthesia of the right side. Ordinary state of the subject.

"V . . . is talkative, violent, and arrogant in look and manner ; his language is correct but rude ; he addresses every one in the second person singular, and gives to each a disrespectful surname. He smokes from morning till night, and besieges every one with

* For the full account of this case see Bourru and Burot, *l'ariations de la personnalité*, 1888.

his demands for tobacco, etc. Still, he is intelligent. He keeps himself *au courant* with all the events of the day, great and small, affects the most anti-religious views in religion, and the most ultra-radical opinions in politics. Incapable of discipline, he wishes to slay all his superiors, or any one even who would exact from him a mark of respect. His speech is embarrassed; his defective pronunciation permits only the endings of his words to be heard. He can read, but this vice of pronunciation renders his reading aloud unintelligible. He cannot write, his right hand being paralysed. His memory, very precise for the slightest details, present or recent, (he recites whole columns from the newspapers,) is very limited in point of time. It is impossible for him to carry back his memory beyond his present sojourn in Rochefort and the last part of his stay at Bicêtre in the service of M. Voisin. Nevertheless, he has preserved the memory of the second part of his stay at Bonneval, when he worked in the garden. Between Bonneval and Bicêtre a great gap yawns in his memory. Beyond this, his birth, his childhood, his sojourn at Saint-Urbain, the trade of tailoring, which he learned upon his arrival at Bonneval, are a total blank to him.

Second state. Hemiplegia of the left side (face and limbs) with hemianæsthesia. This state was obtained by the application of steel to the right arm.

"On waking, V. . . is at Bicêtre (ward Cabanis, No. 11) the second of January, 1884; age, twenty-one; saw M. Voisin yesterday. He is reserved in his bearing; his expression is gentle; his language is correct and respectful; he now addresses no one in the second person singular, but calls each of us 'Monsieur.' He smokes, but not passionately. He has

no opinions in politics or in religion ; these questions, he seems to say, do not concern an ignorant man like him. He shows himself respectful and orderly. His speech is easy and his pronunciation remarkably clear. He reads perfectly well, and writes a tolerable hand.

"He knows nothing whatever of the events that have taken place since the second of January, 1884 ; he does not know where he is, nor any of the persons who surround him. He never came to Rochefort. He never heard of the Marine Corps or of the war with Tonquin.

"In evoking his prior memories he recounts that before entering Bicêtre he had stayed for a while at Sainte-Anne ; beyond that point, in his life, no memory subsists."

Third state. Hemiplegia of the left side (the limbs alone) with general hemianæsthesia. This state was obtained by applying a magnet to the right arm. The patient awakes at the asylum of Saint-Georges de Bourg, August, 1882 ; he is nineteen years old. France is at war with Tunis. M. Grévy is President of the Republic ; Leo XIII. is Pope. His character, his affective faculties, his language, his physiognomy, his tastes are like those of the second state. As to his memory, he is limited to a prior epoch. He comes from Chartres to his mother, whence he has been sent to Macon with a large landed proprietor, where he was put to work in the vineyards. Having been taken sick several times he was cared for in the hospital of Macon, then at the asylum of Bourg where he is at present. All that precedes, all that follows, this short period of his life is totally foreign to him."

Fourth state. Paraplegia. Obtained by the application of the magnet to the nape of the neck.

“He has just seen several persons of the asylum of Bonneval. He is decorous, timid, even sad. His pronunciation is distinct, but his language is incorrect, impersonal, childish. He has forgotten how to read and write. He spells capital letters. His intelligence is very obtuse ; his confused memory knows nothing of the events or of the personages of that epoch. He knows only two places ; Bonneval, where he believes he now is, and Saint-Urbain whence he has come, where he was, he says, paralysed, stricken down. The whole prior part of his life, from his birth to the accident with the viper which brought on his malady, all that followed the attack and the spontaneous alteration of his condition at Bonneval, are absolutely unknown to him. He does not recognise the place he is in, nor has he ever seen us who are about him. His ordinary occupation is work in the tailors’ shop. He sews like one long in the business.”

Fifth state. Neither paralysis nor anæsthesia. Obtained by statical electricity or by the application of the magnet to the front part of the head.

“He regains consciousness at Saint-Urbain in 1877; he is fourteen years old. Marshall McMahon is President of the Republic ; Pius IX. is Pope. Timid as a child, his expression, language, and attitude accord perfectly. He can read perfectly well and writes tolerably. He knows his whole childhood, the bad treatment he received at Luysant, etc.

“He remembers having been arrested and condemned to imprisonment in a house of correction. He is at the reformatory directed by M. Pasquier. He learns to read at the school of Mlle. Breuille, the instructress at Saint-Urbain. He is employed in agricultural work. His memory is arrested exactly at the accident of the

viper, the mention of which brings on a terrible crisis of hystero-epilepsy."

Sixth state. Neither paralysis nor anæsthesia. Obtained by the application of soft iron to the right thigh.

"He comes to consciousness on the sixth of March, 1885; is twenty-two years of age; he knows the events of the times and personages in power; but Victor Hugo, the great poet and senator, is still living. He is no longer the timid child of a moment ago. He is a proper young man, neither pusillanimous nor arrogant; he is a soldier of the Marine Corps. His language is correct; his pronunciation is distinct. He reads very well and writes passably. His memory embraces his whole life with the exception of one epoch, that during which he was afflicted with paraplegia at Saint-Urbain and Bonneval. Also he does not remember having been a tailor and does not know how to sew.

"These, then, are the six different states of consciousness, the *ensemble* of which embraces the whole life of the subject. They were all obtained by physical agents concordantly with the manifestation of sensibility and motility, although the experimenter in acting on the somatic state could obtain at his pleasure any known state of consciousness, complete for the epoch which it embraced, that is to say, with its limited memory of time, places, persons, arts acquired, automatic movements learned (writing, tailoring), with their appropriate sentiments and expression by language, gesture, and mien. The concordance is perfect.

"It remained to make the complementary proof: to act directly on the states of consciousness and to discover whether the somatic state was transformed in accordance with that.

“To act on the psychic state we have no other means except suggestion in somnambulism. We make, therefore, the following suggestion: ‘V . . ., you are to wake up at Bicêtre, ward Cabanis.’ V . . . obeys. On awaking from provoked somnambulism he believes it is the second of January, 1884; his intelligence and affective faculties are exactly what we have seen described in the second state. At the same time he is afflicted with hemiplegia and hemianæsthesia of the left side; the force exerted upon the dynamometer, the hystero-genic zone, all is transferred as in the second state.

“In another suggestion we command him to awake at Bonneval when he was a tailor. The psychic state obtained is similar to that described in the fourth state, and simultaneously with it the paraplegia appeared with contracture and insensibility of the lower parts of the body.”

Messrs. Bourru and Burot conclude as follows:

“(1) In acting on the somatic state by physical means, the experimenter places the subject in the concordant state of consciousness.

“(2) In acting on the psychic state the experimenter renders the somatic state concordant.”

Our conscious personality—more clearly, the consciousness which each one of us has of his present state as connected with prior states—can never be more than a feeble portion of our total personality, which remains buried deep within us. In the normal state the connexion between the two is sufficient and coherent. We are for ourselves and for others a living history, without great gaps. But if in that unconscious (physiological) substratum whence all emerges, *unusually* large groups remain inactive, then the ego

can no longer appear to itself as concordant with its true history. From the pathological state to the normal state there is no difference except that of greater and less. Consciousness reveals to us our ego at each instant only under one aspect of several possible ones.

IV.

Although we have not yet studied the anomalies of personality in all their forms, it will not be out of place here to essay a few conclusions, at least partial and provisory, which will diminish the obscurity of the subject. In so doing, I shall, however, confine myself to a single point—namely, to cases of false personality reducible to a fixed idea, to a dominant idea, toward which a whole group of concordant ideas converges, all others being eliminated, practically annihilated. Such are those who believe themselves God, pope, or emperor, and speak and act accordingly. The study of the intellectual conditions of personality has in store for us a large number of examples of this kind (as hypnotised subjects upon whom a personage or rôle is imposed): but the cases that we already know are sufficient to justify our asking what they teach.

At first sight, these cases are quite simple as regards mechanism of formation. The first origin is obscure: Why is this particular idea produced and not some other? Usually we know nothing of this; but the morbid conception, once born, grows and increases, until its climax is reached by the simple automatism of association. I need not dwell upon this point, longer than to show that these pathological cases explain for us an illusion, into which the psychology based wholly upon internal observation has almost in-

variably fallen, and which may be stated thus: the substitution for the real ego of a factitious ego, much more simple.

To lay hold of the real concrete personality, and not an abstraction put in its place, the right course is not to retreat within consciousness, with closed eyes, and obstinately to interrogate that for our knowledge; but to open our eyes and observe. The child, the peasant, the workingman, the millions of people that walk in the streets and fields, who never in their lives have heard of Fichte, or of Maine de Biran, who never have read dissertations upon the ego and the non-ego, or even a line of psychology—one and all of them have their distinct personality and at each instant instinctively affirm it. Ever since that long-forgotten epoch when their ego was constituted, that is, since their ego was formed as a coherent group in the midst of the processes that assailed it,—that group has constantly maintained itself, though constantly changing. It is composed, in great part, of the states and actions, almost automatic, that constitute in each of us the feeling of the body and the routine of life, and that serve as a support for all the rest, but of which any alteration, even if short and partial, is immediately felt. In part also it is composed of a group of sensations, images, and ideas representing the habitual medium in which we live and move, together with the memories that are connected with them. All this represents organised states, solidly connected, mutually awakening one another, forming a body. Every moment we affirm the fact, without seeking its cause. Everything new or unusual, every change in the state of the body or its environment, is adopted unhesitatingly, and classed by an instinctive act, either as part

of the personality or as foreign to it. This operation is performed every moment, not by a clear and explicit judgment, but by an unconscious and far profounder logic. If this natural, spontaneous, and real form of personality had to be denoted by a single word, I should call it a *habit*, and it cannot be aught else, being, as we maintain, only the expression of an organism. If the reader instead of observing himself will proceed objectively, that is, observe and interpret by the aid of the data of his own consciousness the condition of those who have never reflected on their personality, (and this is the great majority of the human species,) he will find that the preceding thesis is exact, and that the real personality affirms itself not by reflexion but by acts.

Let us now look at factitious, or artificial, personality. When the psychologist attempts by internal observation to catch himself, as he calls it, he attempts an impossibility. At the instant he sets about this task, either he will adhere to the present, which will hardly advance him; or extending his reflexion over the past, he will affirm himself to be the same as he was one year or ten years ago; in either case he only expresses in a more learned and laborious way what every peasant knows as well as he. By inward observation he can only apprehend passing phenomena; and I am not aware that any reply has been given to the following just remarks of Hume: "For my part, when I enter most intimately into what I call *myself*, I always stumble on some particular perception* or other of heat or cold, light or shade, love or hatred, pain or pleasure. I never can catch myself at any time

* In Hume's language, "perception" corresponds about to what we now call "state of consciousness."

without a perception, and never can observe anything but the perception. If any one, upon serious and unprejudiced reflexion, thinks he has a different notion of himself, I must confess I can reason no longer with him. All I can allow him is, that he may be in the right as well as I, and that we are essentially different in this particular. He may, perhaps, perceive something simple and continued, which he calls himself, though I am certain there is no such principle in me." * Since Hume, it has been said: "By effort and resistance we feel ourselves causes." This is very good; and all schools more or less agree, that through this the ego is distinguished from the non-ego; but this feeling of effort remains none the less a simple state of consciousness like the others, the feeling of muscular energy employed to produce some effect.

To seek by analysis to lay hold of a synthetic whole like the personality, or by a mere intuition of consciousness, which lasts hardly a few seconds, to compass such a complex structure as the ego, is to attempt a problem, of which the data are contradictory. Accordingly, psychologists have adopted a different course. They have considered the states of consciousness as accessories, and the bond which unites them as the essential element; and it is this mysterious *underlying something* that, under the names of unity, identity, and continuity, has become the true ego. It is plain, however, that we have nothing here but an abstraction, or more precisely, a scheme. For the real personality is substituted *the idea of the personality*, which is quite another thing. This idea of the personality resembles all general terms formed in the same way (sensibility, will, etc.); but it no more resembles

* *Philosophical Works*, vol. i. p. 312.

the real personality than the plan of a city resembles the city. And as in cases of aberration of personality, which led us to our present remarks, a single idea is substituted for a complexus, constituting an imaginary and diminished personality; so here by the psychologists a scheme of the personality is substituted for the concrete personality, and on this framework, almost totally devoid of contents, they reason, induce, deduce, and dogmatise. It is plain, moreover, that this comparison is made only *mutatis mutandis* and with many restrictions, which the reader will discover for himself. Many other observations might be made, but my work here is not that of criticism.

In fine, to reflect upon the ego, is to assume an artificial attitude, which changes the nature of the ego; it is to substitute an abstract representation for a reality. The true *ego* is that which feels, thinks, acts, without exposing itself to its own view; for by nature and by definition it is a subject; and to become an object, it must undergo a reduction, a kind of adaptation to the optics of the mind which transform and mutilate it.

Hitherto we have treated the question only from its negative side. To what positive hypothesis of the nature of the personality are we led by morbid cases? First, let us eliminate the hypothesis of a transcendental entity, which is incompatible with pathology, and which, besides, explains nothing. Let us set aside, also, the hypothesis which makes of the ego "a bundle of sensations" or states of consciousness, as is frequently repeated after Hume. This is to abide by appearances, to take a group of signs for a thing, or, more precisely, to take effects for their cause. Furthermore, if, as we contend, consciousness is simply an indicative phenomenon, it cannot be a constitutive state.

We must penetrate still further, to that consensus of the organism of which the conscious ego is only the psychological expression. Has this hypothesis more solidity than the other two? Objectively and subjectively, the characteristic trait of personality is that continuity in time, that permanence, which we call identity. This has been denied to the organism, upon the strength of arguments too well known to need repetition here; but it is strange that it should not have been perceived, that all arguments pleaded in favor of a transcendental principle are really applicable to the organism, and that all reasons that can be adduced against the organism are applicable to a transcendental principle. The remark that every superior organism is single in its complexity is as old, at least, as the Hippocratic writings, and since Bichat no one attributes this unity to a mysterious vital principle; but some people have made much ado about this vortex or continuous molecular renovation which constitutes life, and ask, "Where is the identity?" Now, the fact is everybody believes in this identity of the organism, and attests it. Identity is not immobility. If, as some scientists think, life resides less in the chemical substance of the protoplasm than in the movements with which the particles of this substance are animated, it would be a "combination of movements" or a "form of movement," and this continuous molecular renovation would be itself subordinated to conditions more profound. Without dwelling upon the subject, it must be evident to any unprejudiced mind that the organism has its identity. And from this point, what simpler or more natural hypothesis than that of perceiving in conscious identity the internal manifestation of the external identity which is in the organism? "If any one chooses

to assure me that not a single particle of my body is what it was thirty years ago, and that its form has entirely changed since then ; that it is absurd, therefore, to speak of its identity; and that it is absolutely necessary to suppose it to be inhabited by an immaterial entity which holds fast the personal identity amidst the shifting changes and chances of structure :—I answer him that other people who have known me from my youth upwards, but have not my self-conscious certainty of identity, are, nevertheless, as much convinced of it as I am, and would be equally sure of it even if, deeming me the greatest liar in the world, they did not believe a word of my subjective testimony; that they are equally convinced of the personal identity of their dogs and horses, whose self-conscious testimony goes for nothing in the matter; and lastly, that admitting an immaterial substance in me, it must be admitted to have gone through so many changes, that I am not sure the least immaterial particle of it is what it was thirty years ago ; that with the best intention in the world, therefore, I see not the least need of, nor get the least benefit from, the assumed and seemingly superfluous entity.”*

Upon this physical basis of the organism rests, according to our thesis, what is called the unity of the ego, or that solidarity which connects the states of consciousness. The unity of the ego is that of a complexus, and it is only by a metaphysical illusion that the ideal and fictitious unity of the mathematical point can be attributed to it. It does not consist in the act of a supposed simple “essence,” but in a co-ordination of the nerve-centres, which themselves represent a co-ordination of the functions of the organism. Undoubt-

* Maudsley, *Body and Will*, p. 77.

edly, here, we are in the province of hypotheses, but they are at least not of a supernatural character.

Take man in the foetal state, before the birth of the psychic life: leave aside the hereditary dispositions already inscribed in him which will not enter into play until later. At some period of the foetal state, at least during the last few weeks of it, some kind of sense of the body will be produced, if only consisting of a vague feeling of well-being or discomfort. Confused as we may suppose it to be, still it implies certain modifications of the nerve-centres, as much as their rudimentary state admits. When to these simple, vital, organic sensations are added subsequently sensations from external sources (objective or not), these also necessarily produce modifications in the nerve-centres. But they are not inscribed upon a *tabula rasa*; the web of the psychic life has already been woven, and this web is the general sensibility, the vital feeling, which, vague as it may be at this period, after all constitutes almost the whole of consciousness. The bond which connects together the states of consciousness here reveals its origin. The first sensation (supposing there could be such in the isolated state) does not come unexpectedly, like an aerolite in a desert; at its first entrance it is connected with others, with those states that constitute the sense of the body, and which are simply the psychic expression of the organism. Translated into physiological terms, this means that the modifications of the nervous system which represent materially the sensations and their resultant desires (the first elements of the high psychic life) associate themselves with previous modifications which are the material representatives of the vital and organic sensations; by which means relations are established between these

nervous elements ; so that from the very outset the complex unity of the ego has its conditions of existence in this general consciousness of the organism, which, though so frequently overlooked, serves as the support of all the rest. Thus, finally, upon the unity of the organism everything depends, and when the psychic life, having passed from the embryonic state, is formed, the mind may be compared to a gorgeous piece of tapestry, in which the warp has completely disappeared, here beneath a faint design, there beneath a thick embroidery in high relief ; the psychologist who restricts himself to internal observation, sees only the patterns and embroidery and is lost in conjectures and guesses as to what lies hidden beneath ; if he would consent to change his position or to look at the tapestry from behind, he would save himself many useless inductions, and considerably increase his knowledge.

* * *

We might reach the same thesis under the form of a criticism of Hume. The ego is not, as he maintained, a mere bundle of perceptions. Without recourse to the teachings of physiology but confining ourselves wholly to ideological analysis, a serious omission is noticeable here—that of the *relations* between the primitive states. A relation is an element of a vague nature, difficult to determine, because it does not exist by itself. Still, it is something more than and different from the two states by which it is limited. In Herbert Spencer's "Principles of Psychology" there is an ingenious study (too little noticed) of these elements of psychic life, with certain hypotheses respecting their material conditions.* Prof. W. James has recently

* Herbert Spencer, *Principles of Psychology*, vol. i. § 65. W. James, *Principles of Psychology*, vol. i, p. 237 et seq. See also Huxley's *Hume*.

taken up this question. He compares the irregular course of our consciousness to the life of a bird that alternately flies and perches. The resting-places are occupied by relatively stable sensations and images; the places passed in flight are represented by thoughts of the relations between the points of rest: the latter—the “transitive parts”—are almost always forgotten. It seems to us that this is another form of our thesis, that of the continuity of the psychic phenomena, in virtue of a deep, hidden *substratum*, which must be sought in the organism. In truth, that would be a very precarious personality that had no other basis than consciousness, and this hypothesis is defective in the face even of the simplest facts; as, for example, to explain how after six or eight hours of profound sleep, I have no hesitation in recognising my own identity. To place the essence of our personality in a mode of existence (consciousness) which vanishes during almost one third of our life is a singular solution.

We maintain here, therefore, as we have maintained elsewhere in regard to memory, that we must not confound individuality *in* itself, as it actually exists in the nature of things, with individuality as it exists *for* itself, in virtue of consciousness (personality). The organic memory is the basis of all the highest forms of memory, which are only the products of its perfection. The organic individuality is the basis of all the highest forms of personality, which are only the products of its perfection. I shall repeat of personality as of memory, that consciousness completes and perfects it, but does not constitute it.

Although,—in order not to prolong these already protracted considerations,—I have strictly refrained from all digression, from criticism of adverse doctrines,

and from the exposition of points of detail, I must incidentally point out a problem which very naturally presents itself. There has been a great deal of discussion as to whether the consciousness of our personal identity rests on memory or *vice versa*. One says: It is evident that without memory I should only be a present existence incessantly renovated, which does away with all, even the faintest possibility of identity. The other says: It is evident that without some feeling of identity which would connect them together and stamp upon them my mark, my recollections would be no longer my own; they would be extraneous events. So then, is it the memory that produces the feeling of identity, or the feeling of identity that constitutes the memory? I answer: neither the one nor the other: both are *effects*, the causes of which must be sought in the organism; for, on the one hand, the objective identity of the organism is revealed by that subjective condition which we call the feeling of personal identity; and, on the other hand, in it are registered the organic conditions of our recollections, and in it is to be found the basis of our conscious memory. The feeling of personal identity, and memory in the psychological sense, are, accordingly, effects of which neither can be the cause of the other. Their common origin is in the organism, in which identity and organic registration (i. e., memory) are one. Here we encounter one of those incorrectly formulated problems that frequently occur in connexion with the hypothesis of a "consciousness-identity."

CHAPTER III.

DISORDERS OF THE INTELLECT.

I.

IN certain morbid states, the five universally accepted senses are subject to serious derangements. Their functions are perverted or impaired. Now, do such disorders, technically termed "*paræsthesia*" and "*dysæsthesia*," play a part in the alterations of personality? Before examining this point a preliminary question arises: What happens in the case of the suppression of one or of several senses? Is the personality altered, injured, transformed? The answer, resting upon experience, seems to be a negative one.

The total loss of a sense may be acquired or be congenital. Let us first examine the former case. We shall not consider here the two secondary senses of taste and smell, nor the sense of touch in all its different forms, coming, as it does, so near to general sensibility. We shall limit ourselves to sight and hearing. Acquired blindness and deafness are not rare; and are often accompanied by certain changes of character, but these changes are not radical, and the individual remains the same. Congenital blindness and deaf-muteness affect personality more deeply. Individuals who are deaf and dumb from birth, and are limited thus to their own resources and deprived of

artificial language, remain in a state of notorious intellectual inferiority. Often this has been exaggerated,* but the fact is incontestable, and is due to causes that have been too frequently discussed to need repetition. Conscious personality here falls below the normal average; but we have in such cases rather an arrest of development than an alteration of personality in the strict sense of the term.

As for those who are born blind, it is well known that many attain a high standard of intellectuality, and nothing warrants us therefore in attributing to them any diminution or alteration of personality whatever. Notwithstanding that their conception of the visible world, formed only from descriptions of it, may seem odd to us, this does not seriously affect either the nature of their person or the idea they entertain of it.

Let us take the case of Laura Bridgman, a most remarkable instance of sensorial privation, and one that has been very minutely observed, and fully recorded.† At the age of two years this woman was deprived entirely of sight and hearing and almost entirely of the senses of smell and taste; only the sense of touch was left. We must, of course, make a liberal allowance for the patient and the intelligent education to which she owed her development. At the same time the fact remains that her teachers could not endow her with new senses, and that the sense of touch had to suffice for all emergencies. In spite of all these disadvantages this woman shows herself possessed of

* Compare upon this point the facts reported by Kussmaul, *Die Störungen der Sprache*, chap. vii, p. 16 et seq.

† For the chief facts, see the *Revue Philosophique*, vol. i, p. 401; vol. vii, p. 316. The principal data relating to her life have been compiled by her teacher, Mary Swift Lamson, in her work, *The Life and Education of Laura Dewey Bridgman, the Deaf, Dumb, and Blind Girl*. London: 1878. Trübner.

a distinct individuality and of a strongly marked character; an amiable disposition, an almost unfailing good temper, with a patience surpassed only by her zeal for self-improvement; in short, confronts us as an ordinary person.

Omitting the numberless details involved in the preceding cases, we may safely infer that the natural or acquired privation of one or of several senses is not necessarily accompanied with a morbid state of personality. In the least favorable cases there is a relative arrest of development, which is remedied by education.

It is clear, that for those who maintain that the ego is an exceedingly complex compound (and this is our thesis), every change, addition, or subtraction in its constitutive elements will more or less affect the ego. But it is precisely the purpose of our analysis to distinguish among these elements the essential from the accessory. The part contributed by the external senses (touch excepted) is not an essential factor. The senses determine and circumscribe personality, but do not constitute it. If it were not too rash in questions of observation and experience to rely upon pure logic, this conclusion might have been reached *a priori*. Sight and hearing are pre-eminently objective; they reveal to us what is without, not what is within. As to touch—a complex sense, which many physiologists resolve into three or four senses—in so far as it acquaints us with the properties of the external world, and is an eye to the blind, it belongs to the group of vision and hearing; otherwise it is only one form of the feeling that we have of our own body.

It may seem strange that paræsthesia and dysæsthesia, the simple sensorial derangements with which we

are now about to occupy ourselves, should disorganise the ego. Still, observation proves, and reflexion explains, the fact. This work of destruction does not proceed from the sensorial derangements alone; they are but external symptoms of a much deeper internal disorder, affecting the sense of the body. The sensorial alterations are rather auxiliary than efficient causes, as the facts will show.

Alterations of the personality with sensorial disturbances, but without marked hallucinations or loss of judgment, are met with in a certain number of morbid states. We shall select as a type the neurosis studied by Krishaber under the name of "cerebro-cardiac neuropathy." It matters little to us whether or not this group of symptoms should be regarded as a distinct pathological unity; this is a question for physicians.* The purpose of our investigation is quite different.

Let us go over again the physiological disorders whose immediate effect is to produce a change in the *cœnæsthesia* (the sense of the body). First we have derangements of the circulation, consisting chiefly of an excessive irritability of the vascular system, probably due to an excitation of the central nervous system, whence are produced contractions of the smaller vessels, *ischæmia* in certain regions, insufficient nutrition and exhaustion. Then there are disorders of locomotion, dizziness, continuous feeling of vertigo and of inebriation, with stumbling, relaxation of the limbs, or hesitating gait, and an involuntary forward impulsion "as if moved by a spring."

In passing from the internal to the external, we find

**De la névropathie cérébro-cardiaque*, by Dr. Krishaber. Paris: Masson. 1873. In general this disease is regarded not as a distinct species, but as a particular case of spinal irritation or of neurasthenia. See Axenfeld and Huchard: *Traité des névroses*, 1883, pp. 277 and 294.

the sense of touch, which forms the transition from general sensibility to the special senses. Some persons feel as if they were no longer heavy, or were very light. Many have lost the exact notion of resistance, and are unable, by the sense of touch alone, to recognise the form of objects. They imagine themselves "separated from the world"; their body is enveloped, as it were, in insulating media, that interpose themselves between the individual and the external world.

"There appeared," said one of them, "a dark atmosphere about my person; still, I saw very well that it was broad daylight. The word 'dark' does not exactly express my thought; I ought to use the German word *dumpe*, which also means heavy, dense, dull, extinguished. This sensation was not only visual but also cutaneous. I was wrapped up in this *dumpe* atmosphere; I saw it, felt it; it was like a thick layer of a bad conducting substance that insulated me from the external world. I cannot tell you how profound this sensation was; it seemed to me that I was transported far, very far from this world, and mechanically I cried out, in a loud voice, 'I am far, far away.' At the same time I knew perfectly well that I was not far away; I distinctly remembered all that had happened to me; but between the moment that preceded and that which followed my attack there intervened a tremendous interval, a distance like that of the earth from the sun."

Vision is always affected. Not to speak of slight disorders (such as photophobia, amblyopia) some persons see objects double; to others they seem flattened; a man appears to them as a reliefless silhouette. To many, the surrounding objects seem to shrink and to recede into infinite space.

Auditory derangements are of the same character.

The patient no longer recognises the sound of his own voice ; it seems to come from afar, or to lose itself in space, without being able to reach the ear of those whom he addresses, whose answers, likewise, are scarcely heard.

If we will unite in thought now all these different symptoms (accompanied by physical pain, and by derangements of taste and smell), we shall see arise, suddenly, and in a block, a group of internal and external sensations, marked by a new character, connected among one another by simultaneousness in time, and still more profoundly by the morbid state which is their common source. We have here all the elements of a new ego, and, as a matter of fact, it is sometimes actually formed. "I have lost the consciousness of my being ; I am no more myself." Such is the formula which is repeated in the majority of the observations. Others go even further, and at times, fancy themselves double. "One of my strangest ideas, which is forced upon my mind in spite of myself," said a certain engineer, "is my believing myself double. I seem to possess one ego which thinks, and another which acts." (Obs. 6.)

This process of formation has been too well studied by M. Taine for me to take it up. "We might compare the condition of the patient," says this author, "to that of a caterpillar, who, while still preserving all the ideas and recollections of a caterpillar, should suddenly become a butterfly, with the senses and sensations of a butterfly. Between the old state and the new state, between the first ego—that of the caterpillar—and the second ego—that of the butterfly—there is a deep gulf, a complete break. The new sensations find no anterior series with which to connect themselves; the

patient can no longer interpret or make use of them ; he does not even recognise them, they are unknown to him. Hence, two strange conclusions follow ; the first, which consists in saying : " I am not ;" the second, a trifle more advanced, which says, " I am another." *

True, it is difficult for the healthy and well-balanced mind to picture to itself a mental state so extraordinary as this. Yet though inadmissible for the sceptical observer, who looks from without, these conclusions are rigorously correct for the patient who sees from within. To him alone this continual feeling of vertigo and intoxication is like a permanent chaos, in which the state of equilibrium, of normal co-ordination, cannot be established, or, at least, cannot persist.

If now we compare this change of personality *a sensibus læsis* with the other more or less serious forms, we shall find that a new ego is not formed in all cases. When it is formed it always disappears with the sensorial derangements. It is never able entirely to supplant the normal ego ; there is alternation between the two : the elements of the original ego preserve enough cohesion to enable it by turns to regain the ascendancy. Hence the illusion of believing oneself double, which, strictly speaking, is not an illusion to the patient himself.

As to the psychological mechanism by which the patient imagines himself double, I explain it as due to memory. I have previously attempted to show, that the real personality, with its tremendous mass of subconscious and conscious states, is recapitulated in our minds in a single image or fundamental tendency

**Revue philosophique*, vol. i, p. 289, and *L'Intelligence*, 4th Edition, vol. ii, Appendix.

which we call the *idea* of our personality. This vague image (*schéma*), which represents the real personality, about as much as the general idea "man" represents individual men, or as the plan of a city represents the city—suffices for the ordinary needs of our mental life. In our patients, now, two images of this kind must exist and succeed each other in consciousness, according as the physiological state causes the old or the new personality to prevail. But in the transition from the one to the other, sudden as it may appear, there is still a certain continuity. These two states of consciousness have not an absolute beginning in the one case and an absolute end in the other, with a vacancy or hiatus between. Like all states of consciousness they have a duration; they occupy a portion of time, and the terminal end of the one touches the initial end of the other. In other words, they encroach upon each other. When the one begins to exist the other still subsists, in a diminishing state; there is a period of coexistence in which they reciprocally penetrate each other. In our opinion it is *during this period of transition or passage*, whenever it is produced, that the patient fancies himself double.

Let us remark finally, that sensorial derangements are only the result of a more deeply-seated disorder within the organism, and consequently here also the sense of the body plays the principal part in the pathology of personality.

We can now explain how the natural or acquired suppression of one or of several senses leaves the individuality intact in its foundations, while momentary perversions of less serious appearance will transform it.

Physiologically, in the former case, we have a sum-

total of nervous elements condemned to functional inertia, either at the beginning or during the course of life: the personality is like a weak or weakened orchestra, which nevertheless suffices for all necessary purposes. In the second case, all the nervous elements that administer to the injured external senses, to the muscular sensibility, to the organic and visceral sensibility, have suffered an unwonted modification: it is like an orchestra in which the majority of the instruments have suddenly changed their *timbre*.

II.

A natural transition from perceptions to ideas is made through hallucinations; and we shall now study the part played by the latter in the anomalies of personality. At the outset let us recall a few generalities regarding the hallucinatory state. Four hypotheses have been advanced to explain it*: (1) The peripheral or sensorial theory, which places the seat of hallucination in the sense-organs; (2) the psychic theory which localises it in the centre of ideation; (3) the mixed or psycho-sensorial theory; (4) the theory which attributes hallucination to the perceptive centres of the cortical layer.

Observation teaches us that hallucinations sometimes affect one sense only, and sometimes several senses; that most frequently they extend to both sides of the body, but occasionally to one side only (right or left, indifferently); more rarely they are bilateral, yet presenting a different character on each side; thus, whilst one ear is assailed by threats, injuries, evil counsels, the other is comforted by kind and soothing words;

* For a complete exposition of this subject see the important articles of M. Binet, *Revue philosophique*, April and May, 1884.

one eye perceives only sad and repugnant objects, the other sees gardens full of flowers. These latter, at once bilateral and of an opposite character, are for us the most interesting.

Happily, in this immense domain, we have only to explore a very small area. Let us carefully limit our subject. In the normal state the feeling and thinking individual is adapted to his surroundings. Between the group of states and of internal relations which constitute the mind, and the group of states and of external relations which constitute the external world there is a correspondence, as Spencer has minutely shown. In the hallucinated person this correspondence has been destroyed. Hence, false judgments, absurd acts, that is, non-adapted acts. Still, all this constitutes a disease of the reason and not of the personality. Undoubtedly the ego has been dislodged; but as long as the consensus which constitutes it has not disappeared, is not split in two, or has not alienated a part of itself, (as we shall see presently,) so long there is no disease of personality in the proper sense; the derangements are only secondary and superficial. Consequently, the immense majority of the cases of hallucination are withdrawn from our consideration.

Nor have we to occupy ourselves with that numerous category of patients, who misjudge the personality of others, and who take the physicians and attendants of the asylum for their relatives, or their relatives for imaginary persons in some way connected with their delusions.*

* With some patients, the same individual is alternately transformed into an imaginary person and maintained in his real personality. One woman at times recognised her husband, and at times took him for an intruder. She had him arrested, and he had great difficulty in establishing his identity (Magnan, *Clinique de Sainte-Anne*, February 11, 1877).

These eliminations made, the cases to be studied are sufficiently circumscribed; being reduced to changes of personality of which the basis is hallucination. Almost invariably all is reduced to an *alienation* (in the etymological sense) of certain states of consciousness, which the ego does not consider as its own, but makes objective and places outside of itself, and to which, ultimately, it attributes a distinct existence independent of its own.

As to the sense of hearing, the history of religious mania furnishes numerous examples. I shall cite the simplest cases, those in which the hallucinatory state acts at its origin. A woman was persecuted by an internal voice, "which she heard only within her ear," and which revolted against all that she wished. The voice always wished evil when the patient wished good. Without being heard externally, the voice would say to her: "Take a knife and kill yourself." Another hysterical patient first had thoughts and would utter words she had no intention of saying, and soon would express them in a voice that differed from her own. This voice at first only made indifferent or rational remarks; afterwards it assumed a negative character. "At the present time, after thirteen years, the voice simply confirms what the patient has just said, or comments upon her words, criticises them, turns them into ridicule. The tone of this voice, when the mind speaks, always differs a little, and sometimes entirely, from the ordinary voice of the patient, and this is the reason why the latter believes in the reality of this mind. I, myself, have frequently observed these facts."*

As regards sight, alienations of this kind are less

*Griesinger, *Maladies mentales*, French trans., pp. 285-286; Baillarger reports an analogous case, *Annales Médico-psych.*, 1st series, vol. vi, p. 151.

frequent. "A very intelligent man," says Wigan (p. 126), "had the power of putting his *double* before himself. He used to laugh loudly at this double, which would also laugh in return. For a long time this was a subject of amusement to the man; but the final result proved lamentable. By degrees he became convinced that he was being haunted by himself. This other ego taunted him, worried and mortified him incessantly. In order to put an end to this sad existence he arranged his private affairs, and, being loath to begin a new year, on December 31, at midnight, he shot himself in the mouth."

Finally, Dr. Ball, in *L'Encéphale* (1882, II.), reports the case of an American, who, through simultaneous hallucinations of hearing and sight, possessed in all its features an imaginary double. "Prostrated by a sunstroke, he remained unconscious for a month. Shortly after recovering his senses, he heard a distinctly articulated human voice, which said: 'How are you?' The patient answered, and a short conversation ensued. On the following day the same question was repeated. The patient looked around but saw no one. 'Who are you?' said he. 'I am Mr. Gabbage,' answered the voice. A few days later the patient got a glimpse of his interlocutor, who from that time on presented himself with the same features and in the same dress; he would always appear in front, showing only his bust. He had the appearance of a vigorous and well built man of about thirty-six years, with a strong beard, dark-brown complexion, large black eyes, strongly pencilled eye-brows, and was always dressed in hunting costume. The patient would fain have known the profession and habits of his questioner and where he lived, but the man would never consent to

give any other information than simply his name." At last Mr. Gabbage grew more and more tyrannical: ordering the patient to throw his newspaper, watch, and chain into the fire, to take care of a young woman and her child whom he had poisoned, and eventually to throw himself through the window of a third floor, whence he fell and was killed upon the pavement below.

These facts show us the beginning of a *dissolution of personality*. Later on we shall cite other cases which have not hallucination for their basis, and which will make us better understand those already referred to. That more or less perfect co-ordination which in the normal state constitutes the ego, is here partially broken. Within the group of states of consciousness which we feel as our own, because produced or experienced by ourselves, there exists one, which, although having its source in the organism, still does not enter into the consensus, but remains apart and appears distinct from it. This, in the order of thought, is the analogue of irresistible impulses in the order of action: a partial inco-ordination.*

But if these voices and visions emanate from the patient himself, why does he not regard them as his own? This is a very obscure question, but I shall attempt to answer it. There must exist here anatomical and physiological causes, at present unfortunately unknown, the discovery of which would solve the problem. In our ignorance of these causes, we are restricted to the consideration of the surface, the symptoms, and the states of consciousness, with the signs that reveal them. Let us suppose, accordingly, a state of con-

* Concerning irresistible impulses considered as a phenomenon of partial inco-ordination, see my *Diseases of the Will* (Chicago, 1894) p. 54 and following.

sciousness (with its organic conditions) which has the peculiar characteristic of being local, that is of having in its physical and psychic organisation the weakest possible radiation. To make myself understood by antithesis, let us suppose a violent, sudden emotion; it reverberates through the whole system, shakes completely the physical and mental life; it is a complete diffusion. Our case is the reverse of this. Organically and psychically it has only infrequent and precarious connexions with the rest of the individual; it remains apart, like a foreign body, lodged within the organism, but having no share in its life. It does not enter that great woof of the *cœnæsthesis* which sustains and unifies all. It is a cerebral phenomenon almost without support, analogous to the ideas that are imposed by suggestion in hypnotism. This attempt at explanation is corroborated by the fact that the morbid state—if it be not arrested by nature or by medical treatment—has a fatal tendency to increase and expand at the expense of the primitive personality, which, attacked by this parasite, diminishes. Still, in this case it preserves its original qualities, and does not constitute a duplication but an alienation of the personality.

I offer this tentative explanation only as an hypothesis, being convinced that our present deficient knowledge of the organic conditions of the phenomenon precludes the possibility of a satisfactory diagnosis. In submitting it I have been obliged to anticipate what will afterwards be said concerning ideas, and which will furnish us, perhaps, with new arguments in its favor.

* * *

We have now to speak of some recent experiments with hallucinations which, with other facts, have led

some authors to offer an explanation of the duplication of personality as simple as it is palpable. In the first place they point to the functional independence of the two hemispheres of the brain, and conclude hence that from their synergy results the equilibrium of the mind, and from their disaccord various derangements and ultimately the division of the psychic individual. We have here two distinct questions, which several of the scientists whom I shall quote have clearly distinguished, but which others have confounded.

Sir Henry Holland, a physician well known as a psychologist, first studied (1840) the brain as a double organ, and suggested that certain aberrations of the mind might be due to the irregular action of the two hemispheres, of which the one in certain cases seems to correct the perceptions and sentiments of the other. In 1844 Wigan went still further. He maintained that we had *two* brains and not merely one; and that "the *corpus callosum*, far from being a bond of union between them, is a wall of separation;" affirming, even more positively than his predecessor, the duality of the mind.* The progress of cerebral anatomy subsequently yielded other and more positive results; such as the inequality of weight of the two lobes of the brain, their constant asymmetry, differences in the topography of the cortex, etc. The discovery by Broca of the seat of aphasia, was a new argument of great value. It was also supposed that the left hemisphere was the principal seat of intelligence and of will, that the right hemisphere was more particularly devoted to the life of nutrition (Brown-Séguard). I abridge this

* Wigan: *The duality of mind proved by the structure, functions, and diseases of the brains, and by the phenomena of mental derangement, and shown to be essential to moral responsibility*. London, 1844. This badly digested book does not bear out what its title claims.

historical résumé, which could be much lengthened, to revert at once to hallucinations. The existence of simultaneous hallucinations, sad on one side, joyous on the other, in all cases different and even contradictory, at once attracted the attention of observers. But better work was on hand than observation; experiments were to be made. Hypnotism furnished the means. Let us remember that the hypnotised subject can pass through three phases: the first lethargic, characterised by neuro-muscular excitability; the second, cataleptic, produced by raising the eyelids; and the third, somnambulistic, caused by pressure upon the vertex. If during the cataleptic state we lower the right eyelid, we act upon the left brain, and we determine a lethargic state of the right side only. The subject is thus divided into two—hemilethargic on the right, hemicataleptic on the left, and I will now state what occurs, taking the facts from M. P. Richer's well-known book:

“I place upon the table a water-jug, a basin, and some soap; as soon as the patient's glance has been directed towards these objects, or her hands touch one of them, she proceeds with apparent spontaneity to pour water into the basin, takes the soap and washes her hands with minute care. If we then lower the lid of one of her eyes—the right eye for example—then the whole right side becomes lethargic, and the right hand immediately stops; but the left hand still continues the movement. On again raising the eyelid, both hands at once resume their action as before.” The same result may be produced on the left side. “If we put into the patient's hands the box containing her crochet-work, she will open it, take out her work and begin to crochet with remarkable skill. . . . If we

close one of her eyes, the corresponding hand will stop, the arm drop motionless . . . but the other hand, unaided, seeks to continue a work that has now become impossible; the mechanism continues to work on one side, but it modifies its movement with the view of rendering it efficacious."

The author reports several other cases of the same kind, of which I shall only quote the last, because it confirms Broca's discovery. On placing in the hands of the subject an open book, and directing her glance toward one of its lines, she reads. "In the midst of her reading, the closure of the right eye, through the decussation of the optic nerves, which affects the left brain, stops the patient abruptly in the middle of a word or phrase. As soon as the eye is opened again, she resumes her reading, finishing the word or phrase that had been interrupted. If, on the contrary, the left eye is closed, she continues her reading, only hesitating a little on account of partial amblyopia and achromatopsia of the right eye."*

We can vary these experiments. A different attitude is impressed upon the limbs of each side of the body; on one side the subject bears a stern expression, while on the other side she smiles and sends kisses. The hallucinatory state can be provoked on the left side or on the right side. Finally, let two persons approach the subject, one at each ear; the person on the right describes fine weather, the right side smiles; the other on the left describes rain, the left side betrays displeasure and the labial commissure is lowered. Or again, while suggesting through the right ear the hallucination of a picnic, near the left ear let the bark-

*P. Richer, *Etudes cliniques sur l'hystéro-épilepsie*, pp. 391-393.

ing of a dog be imitated ; the face will express pleasure at the right and alarm at the left.*

These experiments, of which we only give a very condensed summary, together with many other facts, have very logically led to the following conclusion : a *relative independence* of the two cerebral hemispheres exists, which by no means excludes their normal co-ordination, but which in certain pathological cases becomes a perfect dualism.

Some authors are inclined to go still further, holding that this cerebral dualism suffices to explain every discrepancy in the mind, from simple hesitation between two resolves, to the complete duplication of personality. If we will at the same time good and evil ; if we have criminal impulses and a conscience that reproves them ; if the insane at times recognise their folly ; if the delirious have moments of lucidity ; if, in fine, persons believe themselves double, it is simply because the two hemispheres are in disaccord ; the one is healthy, the other is morbid ; one state has its seat to the right, its contrary to the left ; it is a kind of psychological manicheism.

Griesinger, on encountering this theory, put forth even in his day with diffidence, after having cited the facts which it claims, and the case of one of his patients, who "felt himself growing irrational only on one side of his head, that is on the right side," concludes with these words : "As for us, we are not inclined to attribute a high value to these facts."† Have they gained in significance since his time ? It is very doubtful. In the first place (since the theory rests on a question of

* Magnan and Dumontpailler, *Union médicale*, May 15, 1883.

† Op. cit., p. 28. See also the negative conclusions of Charlton Bastian on this point, vol. ii, chap. xxiv.

number) are there not individuals who believe themselves triple? I find at least one instance. "In a certain lunatic asylum," says Esquirol, "I met a priest, who through excessive mental application to the theological mystery of the Trinity, eventually came to regard all objects about him as triple. He even imagined himself to consist of three persons, and requested the attendants to lay three covers for him at table, with three plates and three napkins."* I believe that by careful searching we could find other cases of this kind; but I refrain from availing myself of this case of triplicity, which seems to me susceptible of several interpretations. The best possible reasons, supported by every-day facts, could be alleged against this theory. It rests ultimately upon the wholly arbitrary hypothesis that the struggle is always between *two* states only. Experience contradicts this hypothesis completely. Who has not hesitated between acting in two different ways or in *neither*, say between journeying northward or southward, or remaining at home? It happens repeatedly in our lives that we have to decide between three alternatives, of which each necessarily excludes the other two. Where shall we locate the third? for it is in this strange form that the question has been mooted.

In a few cases of congenital atrophy of the brain, apparently based upon authentic observations, individuals have been seen who possessed from infancy only one cerebral hemisphere; yet their intellectual development was not impaired and they resembled in all other respects ordinary men.† According to the

* *Revue des Deux-Mondes*, October 15, 1845, p. 307.

† Cotard, *Etude sur l'atrophie cérébrale*, Paris, 1868; *Dict. encycl. des sciences médicales*, art. "Cerveau" (Pathologie), pp. 298 and 453.

hypothesis here combated, in these individuals no internal struggle could have occurred. However, it is useless to dwell upon this criticism, and I shall content myself by recalling Griesinger's comment upon a well-known line in Faust: "Not only two but several souls dwell within us."

In fact, this discussion would be futile, did it not furnish us the opportunity of viewing our subject under a different aspect. These contradictions in the personality, these partial scissions of the ego, such as are found in the lucid moments of insanity and of delirium,* in the self-condemnation and reprobation of the dipsomaniac, while still drinking, are not oppositions in space (from one hemisphere to the other), but oppositions *in time*. They are—to use a favorite expression of Lewes—successive "attitudes" of the ego. This hypothesis accounts for all that the other explains, as also for what it does not.

If we are thoroughly impregnated with the idea that the personality is a consensus, we shall have no difficulty in comprehending that the mass of conscious, sub-conscious and unconscious states which constitute it, may, at a given moment, be summed up in a tendency or preponderating state which is its momentary expression both to the individual himself and to others. Suddenly the same mass of constituent elements is recapitulated in some contrary state, which thereupon assumes the front rank. Such is our dipsomaniac, who drinks and at the same time reproaches himself. The preponderating state of consciousness at each moment constitutes to the individual and to others his personality. It is a natural illusion, of which it is difficult

*Jessen, in his *Versuch einer wissenschaftlichen Begründung der Psychologie*, p. 189, reports a curious instance of this,

to rid ourselves, yet an illusion which rests upon a partial consciousness. In reality it is only two successive attitudes, that is, a different grouping between the same elements with predominance of some and of what follows. In the same manner our body can successively and quickly assume two contrary attitudes without ceasing to be the same body.

It is clear that three states or more can succeed each other (coexist apparently) by the same mechanism. We are no longer limited to the number *two*. We must, however, acknowledge that this internal scission is more frequent between two contrary states, than between three or a larger number of states. This depends upon certain conditions of consciousness which must be recalled to mind.

Is there a real coexistence between two states of consciousness, or is it a succession so rapid as to appear to be simultaneousness? This is a very delicate question as yet unanswered, although at some future day it may be solved by psycho-physicists. Hamilton and others have maintained that we can have as many as six impressions at the same time, but their results are derived from very crude measurements. The determination, according to the strict methods of physical science, of the duration of the states of consciousness, is a great step in advance. Wundt has tried to go still further, and to fix by experiment what he correctly calls the area of consciousness (*Umfang des Bewusstseins*), that is, the maximum number of states which it can contain at the same time. His experiments bear only upon certain extremely simple impressions (the strokes of a pendulum regularly interrupted by the strokes of a small bell), and consequently are not in every respect applicable to the com-

plex states that here occupy us. He has found "that twelve representations constitute the maximum area of consciousness for successive and relatively simple states."* Experiment, accordingly, seems to decide in favor of a very rapid succession, equivalent to co-existence. The two, three, or four contrary states would be, at bottom, a succession.

We know, moreover, to employ a frequently used comparison, that consciousness has its "yellow spot," like the retina. Distinct vision is only a small portion of total vision; and clear consciousness is only a small portion of total consciousness. Here we touch the natural and incurable cause of that illusion by which the individual identifies himself with his present state of consciousness, especially when it is intense; and, unhappily, that illusion is far stronger for him than for others. We also perceive why apparent coexistence is much easier for two contrary states than for three, or for a larger number. This fact is owing to the limits of consciousness; or, to repeat a previous statement, it is an opposition in time, not in space.

To sum up, the relative independence of the two hemispheres is indisputable. The derangement produced in personality through their disaccord is admitted; but to reduce all to a simple division between the left side and the right side is an hypothesis which as yet is bereft of all substantial foundation.

III.

A few words on the subject of memory. There is no reason why we should study it apart, for it is found

**Grundzüge der physiol. Psychologie*, 2d edition, vol. ii, p. 215. [See also the 4th edition, pp. 286-294.—*Trans.*]

everywhere throughout our subject. Personality, in fact, is not a phenomenon, but an evolution; not a momentary event, but a history; not merely a present or a past, but both. Let us leave aside what I shall call objective, intellectual memory; viz., perceptions, images, experiences, and stored-up knowledge. All this may partially or totally disappear; constituting the diseases of memory, of which I have given numerous examples elsewhere. Let us consider only subjective memory, that of ourselves, that of our own physiological life, and of the sensations or feelings that accompany it. This distinction is purely factitious, but it will enable us to simplify matters.

In the first place, does such a memory exist? It might be maintained that in a perfectly healthy individual the vital tone is so constant that the consciousness which such an individual has of its own body is simply a present, that is incessantly repeated; but, on the contrary, this monotony, if it existed, would, by excluding consciousness, favor the formation of an organic memory. In fact, there are always changes taking place, however slight they may be, and, as we are conscious only of differences, just those changes are felt. As long as they are feeble and partial, the impression of uniformity persists, because the incessantly repeated actions are represented in the nervous system in a far more stable manner than the ephemeral changes. Their memory accordingly is organised beneath consciousness, and hence is all the more solid. Here is the foundation of our identity. Just these diminutive changes act in time and produce what is called the insensible change. After ten years of absence an object, a monument is seen the same, but is not *felt* the same; it is not the faculty of perceiving, but its accom-

paniment, that has changed. However, all this is the state of health, the simple transformation inherent in all that lives and evolves.

Here, then, the vital habitude of an individual is represented by this other habitude,—the organic memory. Causes, mostly unknown, of which we are only able to state the subjective and objective effects, supervene. They produce a sudden and profound, or at least rapid and persistent, transformation of the *cœnæsthesis*. What happens? Experience alone is able to answer, for ignorance of the causes reduces us to pure empiricism. In extreme cases, and we shall not notice others, the individual is changed. This metamorphosis is met with, so far as it concerns memory, under the three following principal forms:

1. After a more or less protracted period of transition, the new personality alone remains; the old personality is forgotten (Leuret's patient). This case is rare. It supposes that the old *cœnæsthesis* has been completely abolished, or, at least, rendered inactive for all time and incapable of reviviscence. We need not wonder at meeting so seldom with cases of this character, if we reflect that *absolute* transformation of the personality, that is, the substitution of one personality for another—complete, without reserve, and with no connecting link between the present and the past—supposes a radical and total change in the organism. To my knowledge no case exists in which the second personality has not inherited at least some relics from the old, be it only certain acquisitions that are automatic, such as walking, speaking, etc.

2. Usually, beneath the new *cœnæsthesis* that has been organised and made the basis of the existing ego, the old organic memory still subsists. From time to

time it returns to consciousness, weakened like any youthful recollection not revived by repetition. The cause of this reviviscence is probably some background common to the two states; then the individual appears to himself another. The existing state of consciousness evokes one that is similar to it, but which has a different accompaniment. The two appear as *mine*, although self-contradictory. Such are the patients who find that everything has remained the same, though changed nevertheless.

3. Finally, there are the cases of alternation. Here it is unquestionable that the two subjective memories—the organised expression of the two *cœnæstheses*—subsist and by turns predominate. Each is accompanied by, and puts into activity, a certain group of feelings, of physical and intellectual aptitudes, which do not exist in the other. Each forms part of a distinct complexus. The case of Azam affords an excellent example of the alternation of two memories.

Upon this subject we can say nothing more without indulging in repetitions or amassing hypotheses. Ignorance of the causes arrests our progress. The psychologist here is in the dilemma of a physician confronted by a disease that only exhibits its symptoms. What are the physiological influences that thus change the general tone of the organism, consequently the *cœnæsthesis* and the memory? Is it a state of the vascular system? Is it an inhibitory action, a functional arrest? No one can say. Until this question is solved, we must remain at the surface. All we have wished to show is that memory, although in some respects blended with personality, is not its last foundation. It is based upon the state of the body, conscious or unconscious; it depends upon it. Even in the nor-

mal state the same physical situation has a tendency to induce the same mental situation. I have frequently observed that at the moment of falling asleep, some dream of the preceding night, until then entirely forgotten, would suddenly return to my recollection distinct in all its details. In travelling, on leaving one town to sleep in another, this reproduction sometimes takes place; but my dream then emerges in disconnected fragments, difficult to reconstruct. Is this the effect of physical conditions—the same in one instance, slightly modified in the other? Although I have not seen this fact mentioned in any work on dreams, I doubt if it is a peculiar experience of my own.

Then again, there are accredited facts of still greater cogency. In natural or induced somnambulism the events of former states, forgotten during wakefulness, return with the hypnotic state. Let us recall to mind the well-known story of the carrier, who when intoxicated lost a packet, which he was unable to find when sober; he got drunk again and found it. Is there not here a marked tendency toward the constitution of two memories—the one normal, the other pathological—expressions of two distinct states of the organism, and which are, as it were, embryonic forms of the extreme cases of which we have spoken?

IV.

The part played by ideas in the transformations of the personality has already been incidentally noted. Let us now watch this new factor at work, and see what it accomplishes by itself and separately. Of all the numerous elements whose consensus constitutes the ego, none, perhaps, can be more easily set apart, or

artificially separated. Still, we must be careful on this point to avoid an ambiguity. To the conscious individual the idea of his personality may be an effect or a cause, a result or an initial factor, a point of arrival or a point of departure. In the healthy state it is always an effect, a result, a point of arrival. In the morbid state it may be both together. In many of the examples enumerated we have seen organic (affective or sensorial) derangements produce such exuberance of life, or such effacement, that the individual declares he is God, king, giant, great man, or automaton, phantom, corpse. These erroneous ideas are obviously the logical expression of some profound transformation of the individual—the definitive formula that recapitulates and fulfils it. But exactly the opposite cases exist in which the transformation of personality is not from below but from above; in which the transformation begins, but is not completed in the brain; and consequently in which the idea is not a conclusion, but a premise. Unquestionably it would be very rash to assert that in many instances where a wrong idea serves as a starting-point for a change of the ego, it has not below it and before it some organic or affective derangement. On the contrary we may confidently affirm that such will always be present, even in hypnotised individuals, in whom personality is changed by suggestion. Between the two forms of metamorphosis above indicated no clear line of demarcation exists; the term “ideal metamorphosis of the personality” is only a designation *à potiori*. Having made this reservation, let us examine this new aspect of our subject, beginning, as before, with the normal state.

Nothing is more common or better known than the momentary appropriation of the personality by some

intense and fixed idea. As long as this idea occupies consciousness, we may say without exaggeration that it constitutes the individual. The obstinate pursuit of a problem, invention, or creation of any kind, represents a mental state in which the whole personality has been drained for the profit of a single idea. We are, to use a common expression, absent-minded, that is automatic. We have here an abnormal state, a rupture of equilibrium. The numberless anecdotes current about inventors, reasonable or flighty, bear witness to the fact. Incidentally let us observe, that every fixed idea is at the bottom a sentiment or a fixed passion. Some desire, love, hatred, or interest supports the idea, and imparts to it its intensity, stability, tenacity. Ideas, whatever we may plead to the contrary, are always at the behest of the passions; but they resemble masters who obey in imagining they rule.

Whatever may be the result, this state is simply a mental hypertrophy, and the public at large are quite right, in identifying the inventor and his work, in designating the one by the other: the work is the equivalent of the personality.

Hitherto we have had no alterations of personality, but simply a deviation from the normal type,—or, better, from the schematic type,—in which by hypothesis the organic elements (affective and intellectual) form a perfect consensus. Hypertrophy at one point and atrophy at others, by virtue of the law of compensation or organic equilibrium. Now let us consider the morbid cases. With the exception of certain artificial alterations produced in hypnotism, it is difficult to find many cases of this class of which the starting-point is incontestably an idea. We may, I think, class among changes of personality due to intellectual causes,

all facts (now rare, formerly frequent) relating to lycanthropy and zoanthropy in their various forms. Still, in all such cases,* of which we have trusty records, the mental debility of the lycanthrope is so great, approaches so near to stupidity, that we are tempted almost to look upon it as a case of retrogression—as a reversion towards animal individuality. Let us add, that, as these cases are complicated with visceral disorders, cutaneous and visual hallucinations, it is not easy to say whether they are the effects of a preconceived idea, or whether they produce it. We must remark, however, that at times lycanthropy was epidemic, which means that in imitators, at least, it must have originated in a fixed idea. Finally, this type of disease disappeared, when people ceased to believe in it, that is, when the idea that a man is a wolf, could no longer fix itself in the brain of a human being, and make him act accordingly.

The only perfectly clear cases of ideal transformation of personality are those already cited, of men who believe themselves women, and of women who believe themselves men, without the sexual anomaly that justifies such metamorphosis. The influence of an idea seems also initial or preponderating in “possessed” subjects, in demonomaniacs. It frequently acts by contagion upon the exorcists themselves. To cite one example only, Father Surin, who was long implicated in the notorious affair of the Ursuline Nuns of Loudun, felt within him two souls, and sometimes, it seems, even three.†

* See Calmeil: *De la folie considérée sous le point de vue pathologique, philosophique, historique et judiciaire*, vol. i, bk. iii, ch. ii, §§ 9, 16, 17; bk. iv, ch. ii, § 1.

† Surin has left a detailed account of his mental state in the *Histoire des diables de Loudun*, p. 217 and following. “I am not able to describe to you

In fine, transformations of personality by the agency of ideas are not of very frequent occurrence; and this is a fresh proof of what we have again and again affirmed, viz., that personality comes from below. In the highest nervous centres personality attains its unity, affirms itself with full consciousness; in them it fulfils itself. If through some inverse mechanism personality proceeds from above to below, it remains superficial, precarious, momentary.

The creation of artificial personalities in hypnotised persons furnishes an excellent proof of this thesis; and M. Ch. Richet has published abundant and precise observations on the subject,* which I shall briefly quote. In turn the hypnotised subject (usually a woman) is made to believe she is a peasant-girl, an actress, a general, an archbishop, a nun, a sailor, a little girl, etc., and plays her parts to perfection. Here the psychological data are perfectly clear. In this state of provoked somnambulism, the real personality remains intact; the organic, emotional, intellectual elements

what takes place within me at such a time (he alludes to the time when the demon passes from the body of the possessed woman into his own), and how that spirit unites itself with mine, without depriving me either of consciousness or of the freedom of my soul, yet becoming like another ego of myself, and as if I had two souls, of which one is dispossessed of its body, and of the use of its organs, and compelled to keep aloof, merely looking upon the doings of the other intruding soul. The two spirits wrestle together in the same field, which is the body, and the soul is as though it was divided. According to the one side of its ego, the soul is the subject of the diabolical impressions, and according to the other side it is the subject of the movements proper to it, or that God gives to it. When—by the movement of one of these two souls—I wish to make a sign of the cross on somebody's lips, the other soul very quickly diverts my hand and seizes my finger to bite it furiously with its teeth. . . . When I wish to speak, I am stopped short; at table I cannot raise a morsel of food to my mouth; at confession I suddenly forget my sins, and I feel the demon coming and going within me as in his own house."

**Revue philosophique*, March, 1883. M. Richet has published more recent observations in his book *L'homme et l'intelligence*, pp. 539 and 541. See also Carpenter: *Mental Physiology*, p. 562 and following.

have undergone no important change, but all exists in a potential state. Some imperfectly understood condition of the nervous centres, some arrest of function, prevents them from passing into action. By suggestion, an idea is evoked, and through the mechanism of association at once excites analogous states of consciousness, and no others; and with them,—always by association,—are induced appropriate gestures, acts, words, and sentiments. In this manner a personality is constituted external to the real personality, composed of borrowed and automatic elements. Experiments of this kind clearly show what an idea can accomplish when freed from all impediments simply by its own powers and destitute of the support and co-operation of the individual totality.

In certain cases of imperfect hypnotism a dualism is established. Dr. North, Professor of Physiology in Westminster Hospital, says, when speaking of a period after he was decidedly affected by looking at a bright disc: "I was not unconscious, but I seemed to exist in duplicate. My inner self appeared to be thoroughly alive to all that was going on, but made up its mind not to control or interfere with the acts of the outer self; and the unwillingness or *inability* of the *inner* self to control the *outer* seemed to increase the longer the condition was maintained."*

* Hack Tuke, "On the Mental Condition in Hypnotism," in *The Journal of Mental Science*, April, 1883. In this article is also found the case of a physician, who, during a restless sleep succeeding twenty hours' climbing in the Alps was doubled in his dream: one of the two egos dies, and the other makes its autopsy. In cases of intoxication and delirium the psychic co-ordination frequently disappears and a sort of double partition of the person is produced. See the articles of Dr. Azam on the alterations of personality (*Revue Scientifique*, November 17, 1883) and those of Dr. Galicier (*Revue Philosophique*, July, 1877, p. 72). Taine has reported a curious case of semi-pathological inco-ordination: "I know a lady, who, while conversing or singing, will write without looking at the paper, connected phrases and even whole pages, wholly

Is it possible, now, to suppress altogether this internal—that is, the true—personality? Can the true character of the individual be utterly destroyed, so as to be transformed into its opposite? Beyond a doubt; the persistent authority of the operator can effect this after a more or less prolonged resistance. Thus M. Ch. Richet has impressed with radical republican ideas a lady noted for her ultra-Bonapartist opinions. Braid, after hypnotising a strict teetotaler, repeated to him several times that he was drunk. “The affirmation was corroborated by a sensation of staggering (produced by muscular suggestion), and it was amusing to behold him divided between this imposed idea and the conviction resulting from his ordinary habits.”* There is nothing alarming, however, in this momentary metamorphosis. As M. Richet justly remarks, “in these curious modifications only the external form of the person changes, the habit and general attitudes, not the individuality, properly so called.” Whether, by repeated suggestions, we might not, in susceptible subjects, eventually produce a permanent modification of character, is a problem that experience alone can solve, and one lying beyond our present aim.

Perhaps this is a favorable opportunity for calling attention to the phenomena known as the *disappearance of personality*, which the mystics of all epochs and

unconscious of what she writes. To me her sincerity is unquestionable; she declares, on arriving at the bottom of the page, that she has not the slightest idea of what she has been tracing on the paper; when she reads her writing, she is herself astonished, sometimes even alarmed at it. The handwriting is different from her ordinary style. The movement of the fingers is stiff, and seems automatic. Her writing always finishes with a signature—that of a deceased person—and gives the impression of secret thoughts, of a mental background, which the author is not inclined to divulge. (*De l'intelligence*, 3d edit. pref., pp.16-17.)

*Richet, op. cit., p. 541; Carpenter, op. cit., § 368.

countries have described from their own experience, and often in beautiful language.* Pantheistic metaphysicians, though far from attaining the state of ecstasy, have also spoken of a condition in which the mind thinks itself "under the form of eternity"—appears to itself beyond time and space, free from all contingent modality, one with the infinite. This psychological phenomenon, though rare, should not be overlooked. I take it to be the absolute possession of the mental activity by a single idea (positive to mystics, negative to empirics), but which, by its high degree of abstraction, and its absence of determination and limits, contradicts and excludes all individual feelings. Let a single sensation, however ordinary, be perceived, and the entire illusion is destroyed. This state is neither above nor below the personality, but without and beyond it.

In fine, those states of consciousness that we call ideas, are a secondary factor only in the constitution and alterations of the personality. The idea plays its

*Of these descriptions I shall cite only one—the nearest to us in language and time. "It seems to me that I have become a statue on the banks of the river of time, and am attending the celebration of some mystery from whence I shall come forth old or without age. I feel myself anonymous, impersonal; my eye is fixed as in death: my mind is vague and universal, as nihility or the absolute. I am in suspense; as if non-existent. In these moments it seems to me that my consciousness withdraws into its eternity . . . it perceives itself even in its substance, superior to every form containing its past, present, and future; a vacuum that encloses everything; an invisible and prolific medium; virtuality of a world divesting itself of its own existence, in order to lay hold of itself again in its own pure inwardness. In these sublime instants the soul has re-entered into itself; and having returned to the state of indetermination it is reabsorbed beyond the bounds of its own life, it becomes again a divine embryo. Everything is effaced, dissolved, distended; changed into its primitive state, re-immersed in the original fluidity, without shape, angles, or definite design. This state is contemplation and not stupor; it is neither painful, nor joyous, nor sad; it is without all special feeling and beyond all finite thought. It is the consciousness of being, and the consciousness of the latent omnipossibility at the base of this being. Such is the sensation of the spiritual infinite." (Amiel, *Journal intime*, 1856, cited by M. Schérer in his preface.)

part, but it is not a preponderating one. These results are in accord with what psychology has long taught, namely, that ideas have an objective character. Hence, they cannot express the individual as his desires, sentiments, and passions do.

CHAPTER IV.

DISSOLUTION OF PERSONALITY.

I.

IN closing our review of the facts, I must not omit to say a few words regarding changes of personality in progressive dementia, due to old age, general paralysis, or other morbid condition. If in the normal state the personality is a relatively perfect psychophysiological co-ordination, which maintains itself in spite of perpetual changes and partial and transient inco-ordinations (like sudden impulses, eccentric ideas, etc.), then dementia, which is a progressive march towards physical and mental dissolution, ought to exhibit itself in a constantly increasing inco-ordination, up to the moment at which the ego disappears in the absolute incoherence, and there only remain in the individual purely vital co-ordinations, viz., those that are best organised, the lowest, simplest, and consequently the most stable, which disappear in their turn also. Perhaps in these states of progressive and inevitable dissolution we find the only cases of double personality in the strict sense of the word, that is, *coexistent* personalities. We have, in the course of this work, found many cases of successive personalities (those of Azam, Dufay, Camuset); of a new personality substituted for a forgotten or expelled personality, regarded as ex-

ternal and foreign (the cases of Leuret and the Austerlitz soldier); finally, the invasion of the normal personality by unusual sensations, which it resists as well as it can, and which *sometimes and momentarily* cause the patient to believe himself double (case of Krishaber, etc.). But in demented subjects the disorganisation is organised: they are double, believe themselves double, and act as double personalities. There is not the least doubt about it in their minds. They do not even preserve that remnant of indecision, which in the numerous cases I have cited, show that the normal personality (or what remains of it) still retains a residuum of force, which after weeks or months is to assure its return. To them it seems as natural to be double, as to us it does to be single. There is no scepticism on their part as regards their state, nor do they tolerate it in others. Their mode of existence, given to them by their consciousness, appears to them so clear and evident as to be above all doubt, or the supposition of it. It is important to note this point, because it proves, in these morbid forms of the personality, that spontaneity of affirmation and action which is characteristic of all natural states. The following are two instances of this kind. An old soldier, D . . . , who afterwards became a sergeant of the police, sustained several severe injuries on his head, followed by a gradual loss of memory which rendered him incapable of performing his duties. His mind became more and more perturbed, until finally he believed himself double. "In speaking he always uses the pronoun *we*: *we shall go, we have walked much, etc.* He explains that he speaks in this way because there is another person within him. At table he says: "I have had sufficient, but the other has not." He starts running; and upon

being asked why he is running he answers that he would prefer to rest, but that 'the other' compels him to run, although he tries hard to hold him back by the tails of his coat. One day he pounces upon a child and tries to strangle it, saying that it is not himself who does it but 'the other.' Finally, he tries to commit suicide in order to kill 'the other' whom he believes to be concealed in the left side of his body, and whom he therefore calls by the name of the left D as opposed to himself, the right D This patient by degrees became totally demented."*

A case reported by Langlois takes us one stage lower still. "The subject G is imbecile, shiftless, loquacious, without hesitation in speech, and free from paralysis or derangement of the cutaneous sensibility. Notwithstanding his loquacity, he repeats only certain stereotyped phrases. He always speaks of himself in the third person, and almost every morning he receives us saying: 'G is sick, he ought to be taken to the infirmary.' Frequently he will go down on his knees and soundly box his own ears, then laugh immoderately, and, rubbing his hands with an air of satisfaction, exclaim: 'G has been naughty, and had to be punished.' He will also seize his wooden shoe and violently strike his head, thrust his nails into his cheeks and tear the flesh. These moments of fury occur suddenly, and while they last his countenance expresses anger, which is followed by an expression of satisfaction as soon as he has ceased to correct the other. When he is not over-excited from his imaginary resentments, we ask him: 'Where is G?' 'Here he is,' he answers, striking his chest. We touch his head, asking him to whom it belongs. 'That,' says

*Jaffe, *Archiv für Psychiatrie*, 1870.

he, 'is a pig's head.' 'Why do you strike it thus?' 'Because the pig's head has to be punished!' 'But just now you have struck G....' 'No, G.... has not been bad to-day; it is the pig's head that has to be beaten.' For several months we asked him the same questions and invariably obtained the same answers. Generally G.... is discontented, but sometimes the opposite is the case, and then the head is not struck."*

A patient, suffering with general paralysis, in a state bordering on dementia, was incessantly reproaching himself or giving himself advice. He would say: "You know, Mr. G...., that you have been placed in this establishment. You are doing very well here. We warn you that we entirely despair of your recovery, etc., etc." As the general paralysis progressed his words became less intelligible. Still, even in the midst of his delirium this conversation with himself was to be noticed. Sometimes he would ask and answer questions. The patient still exhibited this inclination when the dementia was complete. He would shout and become excited; but soon he would calm down, and say to himself in a low voice and with a marked gesture: "Will you be quiet and speak lower?" Then he would reply, "Yes, I will speak lower...." Another time we found him very busy making all the movements of tasting and spitting. We ask him: "Are you amusing yourself, Mr. G....?" He answers: "Which one?"—and then relapses into his previous incoherence. This reply, reproduced here *verbatim* with the question, may seem the result of chance, but it accords so perfectly with the duality

**Annales medico-psych.*, sixth series, vol. vi, p. 80.

long observed in the patient, that we have not ventured to pass it over in silence.*

In the succeeding observation the dissolution of the personality presents itself under a different aspect. The individual there lost consciousness of a part of himself, which had become strange and hostile to him. In speaking of hallucinations, we saw that the patient gradually invests them with bodily form, finally casting outside himself the creation of his imagination. In demented patients the case is more serious. It is a question here of acts or states perfectly normal to a healthy subject and having nothing of the morbid and imaginary character of hallucinations; but the patient perceives them as external to himself, and is not conscious of being the cause of them. How are we to explain this singular condition without supposing a profound change in the *cœnæsthesis*; without supposing that certain parts of the body are no longer represented or felt within the collapsed brain? Visual perception indeed still subsists (experience proves it); but the patient sees his own movements as an external, antagonistic phenomenon, which he attributes neither to himself nor to others and attests only passively without further searching, because, his internal sensations having been abolished, and his faculty of reasoning

*Descourtis, *Du fractionnement des opérations cérébrales et en particulier de leur dédoublement dans les psychopathies*, Paris, 1882, pp. 33-34. See also pp. 32 and 35. It is possible that the second personality, which advises and admonishes the other, is only the purely passive reproduction of the phrases addressed to the patient by his physician or attendants. Let us also remark that it is not by any means uncommon for demented subjects to speak of themselves in the third person. This may also be observed in little children, and has been accounted for by the fact that their personality has not as yet revealed itself. In my opinion it is simply a phenomenon of imitation. The child is accustomed to hearing such remarks as: "Paul has been naughty; Paul must be whipped," etc. The child thereupon addresses itself in the same manner. Could the use of the third person by certain demented subjects be a case of retrogression?

being powerless, there is no help for the existing inco-ordination.

Then we have the case of the man suffering from general paralysis in the period of dementia, whose utterance had become almost unintelligible, and whose knowledge of the external world was much obscured. "One day he was engaged in picking peas. Although very awkward and naturally right-handed, he employed only his left hand. Now and then the right hand would stretch forth, as if to perform its share of the work, but would hardly reach its object, when the other hand would seize it and violently restrain it. At the same time the countenance of the patient expressed much anger, and he would repeat in a commanding tone: 'No, no!' His frame shook with sudden fits of excitement, and everything betokened a violent struggle going on within him. At another time, when they had to tie him in an arm-chair, his features grew clouded, and, seizing his right hand with his left, he cried out: 'Look! it is your fault; it is all through you that I have been bound here,' and thereupon he struck the offending hand repeatedly.

"The two occurrences were not isolated. At different times it was observed that whenever the right hand emerged from its customary inactivity, the patient would stop it with his left. He would grow angry and excited, and strike at the hand as violently as his strength allowed him. Sensibility was still preserved in the upper right-hand member as elsewhere, although it had grown dull."*

Some demented patients attribute to others the sounds which they utter themselves, and complain of being disturbed by their cries. Finally, let us quote a

*Descourtis, *op. cit.*, p. 37.

case, observed by Hunter, of an old man whose faculties were extremely enfeebled. He incessantly referred to the present time the incidents of his earlier days. "Although able to act correctly, according to definite impressions, and to attribute them to those parts of his body which they affected, he still had the habit of constantly imputing his own sensations to the people who surrounded him. Thus he would say to his keeper and the assistants that he was sure *they* were hungry or thirsty. But if food or drink was brought to him, it was evident from his avidity that the absurd idea in question had been suggested to him by his own feeling of hunger or thirst, and that the word *they* referred to himself, and not to the others. He was subject to violent fits of coughing. After each paroxysm he would resume the thread of his conversation; but only after having expressed, in appropriate terms, how sorry he was to perceive the sad state of his friend's health. 'I am grieved,' he would say, 'to see *you* suffering from such a painful and exhausting cough.' " *

Gradually all these cases terminate in a constantly increasing inco-ordination, in a complete incoherency. They approach to that congenital imbecility which has never yet reached the average level of human personality. In idiots, that co-ordination of multiple and ascending states which constitutes the normal man, has been arrested in its development. Evolution has not passed the first stage. It has provided merely for the physical life and with it for a few elementary psychic manifestations. The conditions of ulterior development have been lacking. In concluding this treatise, therefore, we must inquire more minutely into this fact of co-ordination, as the basis of personality.

* Hunter. See Winslow's work, *On Obscure Diseases of the Brain*, p. 278.

II.

But first let us make a cursory classification of the derangements of personality as shown in our numerous illustrations, so unlike one another that at a first glance it seems impossible to reduce them to a few fundamental types.

Although in the normal state the sense of the body changes in various ways during life, especially through that evolution which leads us from birth to death—still the change is usually so slow and continuous that the assimilation of new sensations takes place gradually and the transformation is imperceptible, thus realising what is called the personal identity, or apparent permanency in the midst of incessant variations. On the other hand, serious diseases, or certain radical changes, e. g., climacteric periods, puberty, etc., induce a little indecision ; the fusion between the new and the old state is not immediate, and, as has been observed, “the novel sensations at first present themselves to the old ego as a foreign ego, exciting surprise.” But if the general sense of the body is abruptly modified, if a sudden and abundant afflux of unusual states is produced, then the fundamental element of the ego is completely transformed ; the individual is separated from its old personality, appears to itself like another. Most frequently a period of derangement and uncertainty occurs, and the rupture is not instantly effected. When this morbid state is fixed, three principal types of the diseases of the personality may, in our judgment, be presented :

1. The general feeling of the body is totally altered.

The new state serves as the basis of a new psychic life—of a new mode of feeling, perceiving, and thinking, whence results a new memory. Nothing of the old ego remains except the perfectly organised functions, such as walking, speech, manual work, etc.,—purely automatic and practically unconscious activities, which like slaves are ever ready to serve a new master. It must be observed that this type in actual cases presents certain exceptions. Occasionally a part of the automatic acquisitions do not enter into the new ego. Again, at wide intervals a few vestiges of the old personality are revived, and throw a transient indecision into the new one. Taking a general view of the symptoms, and disregarding unimportant deviations, we may say that we have here an *alienation* of personality, the old having grown *alien* to the new, so that the individual is ignorant of its former life, or when reminded of it contemplates it objectively, as separated from itself. A typical instance of this is found in the woman of Salpêtrière who from her forty-eighth year always spoke of herself as “the person of myself.” Concerning her former personality she would give much correct information, always attributing it, however, to another: “The person of myself does not know that which was born in 1779” (her former personality).* The case of “Old Lambert” (see p. 32) also belongs to this type. Hack Tuke cites the case of a patient who for several years was an inmate of Bedlam Hospital. This patient had lost his ego, (that is the one which was familiar to him,) and was in the habit of searching for himself under his bed.†

* For a full account of this case see Leuret, *Fragments psychologiques*, pp. 121-124.

† *The Journal of Mental Science*, April, 1883.

2. The second type has as its basic character the *alternation* of two personalities, and to this type especially belongs the current designation of double consciousness. We have already remarked that between the first and second type we should find forms of transition ; but for the present we shall only consider cases that are clear and well defined. The physical cause of this alternation is very obscure, one might say unknown. At the time when the second personality first appears, these cases do not differ from those of the first class ; the difference begins with the reappearance of the first personality. It is difficult to resist the hypothesis, that in these patients, who are usually hysterical—that is, highly unstable—along with the secondary variations, two distinct *habitus* in the physical life exist, each of which is the basis of a separate psychic organisation. This will appear more probable, if we remember that the alternation in question affects the character, affects that which is innermost in personality, that which most profoundly expresses the individual constitution (e. g. the cases of Azam, Dufay, Camuset).

In this type of alternation also we have different forms. Sometimes the two personalities are unknown to each other (case of Macnish). At other times one embraces the whole life, the other being only partial ; such is the case of Azam. Finally in this case—which is the most instructive, because it now covers a period of twenty-eight years*—we see the second personality constantly encroaching upon the first, which having been originally very long, is gradually becoming shorter and shorter, so that we can foresee a time when it will completely disappear, and the second only will remain.

*In 1885.

It would seem, accordingly, that this state of alternation, when prolonged, has a fatal tendency to reduce itself to the first type, occupying thus an intermediate position between the normal state and the total alienation of the personality.

3. The third type is more superficial; I shall call it a *substitution* of personality. To this type I refer the rather common cases in which the individual merely believes his condition to be changed; e. g. a man declares himself a woman, or *vice versa*; a rag-picker fancies himself a king, etc. The state of certain hypnotised subjects, of whom I have spoken, may serve as types of this class. The alteration is rather psychical, in the restricted sense of the word, than organic. Not that I suppose for a moment that it arises and persists without material conditions. I only wish to say that it is not, as in the two preceding groups, caused and supported by a profound modification of the feeling of the body, carrying with it a complete transformation of the person. It proceeds from the brain, not from the lowest depths of the organism; and is rather a local, than a general, disorder—the hypertrophy of a fixed idea, rendering impossible the co-ordination necessary for the normal life of the mind. Hence, whilst in alienation and alternation of personality everything conspires and co-operates to one end, and exhibits the usual logical and internal unity of organic compounds, in the present type it is not uncommon for him who claims himself a king to admit he has been a workingman, and for the pretended millionaire to confess that he has only earned two francs a day. Even apart from these cases, in which the inco-ordination is obvious, we can easily see that a fixed

idea is only a diseased excrescence, which does not suppose a total transformation of the individual.

This classification, which proceeds from the gravest to the lightest forms, makes no pretensions to completeness. It merely serves for bringing a little order into the facts: to show how unlike they are; and, above all, to demonstrate once more that personality has its roots in the organism, and that it changes and is transformed with it.

CONCLUSION.

I.

IT is an inevitable consequence of the doctrine of evolution that the higher forms of individuality should have proceeded from the lower by aggregation and coalescence. Consequently, individuality at its highest stage, in man, is the accumulation and condensation in the cortical layer of the brain of elementary consciousnesses, at their origin autonomous and dispersed.

All the different types of psychic individuality in the animal series, from the lowest to the highest, could be described and fixed only by a psycho-zoölogist, and at the cost of much groping amidst uncertainties and conjectures. We shall call attention, therefore, only to a few types, and wholly in view of the principal aim of the present work, which is to show that the ascending progress towards higher individuality is epitomised in an increasing complexity and co-ordination.

When we speak of a man, of a vertebrate, or even of an insect, nothing can be more clear than the term "individual." Nothing is more obscure as we descend the scale. Upon this point all zoölogists are agreed.* According to the etymology of the word, the individual

* See in particular: Haeckel, *General Morphology*; Gegenbaur, *Comparative Anatomy*; Espinas, *Sociétés animales*, second edit., appendix ii; Pouchet, *Revue scientifique*, February 10, 1883, etc.

(*individuus*) is that which cannot be divided. On that score, the individual, in the strict sense of the word, would have to be sought for at a very low stage. While nothing limits the dimensions of inorganic compounds (crystals), "every protoplasmic mass that attains a few tenths of a millimetre splits up spontaneously into two or several distinct masses, equivalent to the mass from which they were derived, and which are reproduced in them. Protoplasm, accordingly, exists only in the *individual* state, which is limited in its size; and this is why living beings are necessarily composed of cells."* Life could never have attained a notable growth except by the indefinite repetition of the same fundamental theme, by the aggregation of an infinite number of these little elements, true types of individuality.

The living and homogeneous matter constituting these elementary, primordial individualities spreads itself, rolls itself up, lengthens out into tiny filaments, moves from place to place, creeps toward substances fit for its nutrition, absorbs them, decomposes and assimilates their matter. In this connexion, scientists have spoken of "rudiments of consciousness," of obscure volition, determining itself under the action of external stimulations and vague needs. We may employ this term in default of a better one, but must not forget that it has no precise signification for us. In a homogeneous mass which does not present the slightest trace of differentiation, in which the essential vital properties (nutrition, generation) are diffused and indistinct, the only and very humble representative of

* Perrier, *Les colonies animales et la formation des organismes*. Paris, 1881, p. 41. According to Cattaneo, *Le colonie lineari e la morfologia dei molluschi*, the division might be carried still further.

psychic activity is the irritability common to all living beings, which by evolution becomes later general sensibility, special sensibility, and so on. Can this be called a consciousness?

The first step towards a higher individuality consists in the association of individuals almost completely independent of each other. "Enforced proximity, the continuity of the tissues, the almost constant unity of the digestive apparatus, establish between them a number of relations, which prevent the individual from remaining a perfect stranger to what takes place in its nearest companions. Such is the case with sponges, colonies of hydra-polyps, coralline polyps, bryozoans, and a few colonies of ascidians."* Yet, properly speaking, all this is merely a juxtaposition, a linking together of a heap of small, contiguous, and homogeneous consciousnesses, having between them no other community than that imposed by the limitations of their aggregation in space.

The birth of a *colonial* individuality and consciousness is a great step towards co-ordination. Formed of elementary individualities, such a colony tends to transform itself into an individuality of a higher order, in which a division of labor takes place. In colonies of *Hydractinidæ* we meet with nutritive individuals, reproductive individuals, male and female, and with individuals for feeling or seizing prey—in all seven. Among the siphonophorans, for example, in *Agalma*, whose whole organism measures over a metre, and in allied types, the function of locomotion is completely centralised. The individuals composing it seem independent so long as the animal allows the common axis upon which they are imbedded to float, but when in

* Perrier, op. cit., p. 774; Espinas, *Les sociétés animales*, section 2.

danger, or if the animal wishes to execute a complex movement, the axis contracts, dragging along with it all the polyps. *Physalia* (Portuguese man-of-war) is able to accelerate or slacken its movements, to float and dive at will, ascend, descend, go straight forwards, or swerve aside; it can make all its individual organs concur in these complicated acts. A migratory life, observes M. Perrier, seems to favor the development of individuality. "A greater dependence of all the individuals necessarily results; more intimate bonds are established between them; the impressions produced upon any part of the whole must necessarily be transmitted to the locomotor parts; and the movements of the latter must be co-ordinated, or all would be disorder. There accordingly arises a kind of *colonial consciousness*, through which the colony tends to constitute a new unity, and to form what we call an *individual*."* In other colonies the common consciousness is formed in a different manner. In *Botryllidæ* (tunicaries) there is a common orifice, the cloaca, round which are disposed all the individuals. Each of them emits toward the cloaca a tongue-like member provided with a nervous process, by the aid of which communication can be established in a permanent manner between all the members of the same group.† But "because a colony acquires the notion of its existence as a colony, it does not follow necessarily that each of the individuals that compose it loses its particular consciousness. On the contrary, each individual continues to act as if it were single. . . . With certain kinds of star-fish each severed arm continues to creep, to follow a given route or to deviate from it, as the case may happen, to

*Perrier, op. cit., pp. 232, 239, 770, 248, and 262.

†Ibid., p. 771.

quiver when it is excited—in a word, to betray real consciousness. The consciousness of a ray is nevertheless subordinate to the consciousness of the whole starfish as is proved by the harmony which is established between the movements of the several parts, when the animal changes its position.”*

As for man, in whom centralisation has reached a very high stage of development, it is exceedingly difficult to obtain anything like a clear idea of this mode of psychic existence in which partial individualities and a collective individuality exist together. Strictly speaking, we might find an analogue of it in certain morbid states. We might also say that the human individual is conscious of itself both as a person and as a member of society; but I shall avoid comparisons that may be contested. Taking the question objectively and looking at it from without,—the only side accessible to us,—we see that this colonial consciousness, intermittent and feebly co-ordinated as it is at its origin, marks, nevertheless, a capital factor in the evolutionary process. It is the germ of the higher individualities—of personality itself. By degrees it will pass to the front rank, confiscating for its benefit all the particular individualities. In the political domain we see strongly centralised countries pursue a similar evolution. The central power, at first very feeble, hardly recognised, and often less important than its subordinates, is strengthened at their cost, and, by slow and gradual absorption, at last obliterates them.

The development of the nervous system—the coordinator *par excellence*—is the visible sign of a progress towards a more complex and more harmonious individuality. But this centralisation is not estab-

*Ibid., pp. 772-773.

lished all at once. In the annelidous animals the cerebroid ganglia, which send out nerves to the organs of the senses, seem to discharge the same functions as the brain of the vertebrates. Yet, complete centralisation is far from having been effected here. The psychological independence of the different rings is evident. "Consciousness, which is more distinct in the brain, tends to grow fainter in proportion as the number of rings increases. Certain *Euniceæ* (a group of Annelids) attaining a length of 1.5 metres, bite the posterior extremity of their body without seeming in the least to feel it. To this diminution of consciousness we have doubtless to attribute the facility with which Annelids, kept in captivity under disagreeable conditions, voluntarily mutilate themselves." In linear colonies, the individual forming the front, being compelled to take the initiative for all the rest, to advance, retreat, or modify the gait of the colony which it drags behind it, becomes a *head*; but it must be understood that zoölogists only use this term comparatively, and we must not assume that it corresponds exactly to what is called a head in an insect or other articulated animal. The individuality which it represents is so indefinite, that in certain asexual Annelids, composed of forty rings, we see the head of a sexual individual form at the level of the third ring, furnish itself with tentacles and antennæ, and thereupon detach itself from the primitive individual in order to live its own life.*

For details we refer the reader to special works; as to the higher animals it is needless to dwell upon the subject; individuality in the usual sense of the word is already constituted there, and is represented

* Perrier, *ibid.*, p. 448, 491, 501.

by the brain, which becomes more and more predominant. But this digression into the domain of zoölogy will not have been in vain, if it has made clear that the co-ordination, so frequently mentioned, is not a simple theory, but an objective, visible, and tangible fact; that, as Espinas maintains, psychic individuality and physiological individuality are parallel, and that consciousness is unified or dispersed with the organism. Still, the term consciousness or psychic individuality is full of pitfalls which I shall not attempt to conceal. If psychic individuality is, as we maintain, only the subjective expression of the organism, in proportion as we depart from the human type the greater will be the obscurity that surrounds us. Consciousness is a function which can be compared to that of generation, because both express the whole individual. Let us grant to the most elementary organisms a consciousness—diffuse as all their vital properties, particularly generation. We see the latter, according as we ascend, become localised, monopolise a part of the organism, which, by countless modifications and improvements, becomes for that function and that alone the representative of the whole organism. The psychic function follows a similar process. In its highest degree it is distinctly localised; it has monopolised a part of the organism, which for that function and that alone becomes the representative of the whole organism. By a long series of successive functional delegations, the brain of higher animals has succeeded in concentrating within itself the greater part of the psychic activity of the colony; by degrees it has received a more and more extended mandate, before obtaining the complete abdication of its associates.*

* Espinas, *Les sociétés animales*, p. 520.

But, in taking an animal species at hazard, how are we to know exactly the degree which the psychic activity has attained? Physiologists have made many experiments upon the spinal cord of frogs; is its relative psychic value the same with man? It is very doubtful.

II.

Let us revert to man, and study first his purely physical personality. For the present let us eliminate all states of consciousness,—reserving them for later,—and consider only the material bases of human personality.

1. We need scarcely remind the reader that all the organs belonging to the so-called vegetative life—the heart, the vessels, the lungs, the intestinal canal, the liver, kidneys, etc.—although they are apparently independent of each other, and seem each entirely absorbed in its own functions, are nevertheless intimately and solidly bound together. The centripetal and centrifugal nerves of the great sympathetic system and of the cerebro-spinal system (the difference between which tends more and more to become effaced) together with their ganglia, are the innumerable agents of this co-ordination. Now, is the activity of the latter reducible to the simple molecular disturbance which constitutes the nervous influx, or has it also a psychic, conscious effect? There can be no doubt as to morbid cases; here that activity *is* felt. In the normal state it only produces that vague consciousness of life which we have so often mentioned. But vague or not, it matters little. We maintain that these nervous actions, which represent the totality of organic life, are really

the fundamental facts of personality, and that their value as such is, so to speak, in the inverse ratio of their psychological intensity. They do vastly more than merely call forth a few unstable and superficial states of consciousness; they fashion the nervous centres, and impart to them their peculiar tone and habit. Imagine for a moment the prodigious power of such actions (however weak we may suppose them), carried on incessantly, without rest or respite, constantly repeating the same theme with few variations. Why should they not have for their result the constitution of organic states—stable by definition, and the anatomical and physiological representatives of the internal life? Obviously, all is not derived from the viscera alone, for the nervous centres also have their peculiar innate or hereditary constitution by virtue of which they react; they are not only receivers, but inciters; and we must not separate them from the organs which they represent, and with which they form a unity: between the two there is reciprocity of action.

Where do all these nervous actions finally arrive that thus recapitulate the organic life? We do not know. Ferrier supposes that the occipital lobes are in some special connexion with the sensibility of the viscera, and constitute the anatomical substratum of their sensations. Let this be granted merely as an hypothesis, and so as to fix our ideas. The result would be that from stage to stage, from delegation to delegation, the visceral life would here find its last representation; that it would be inscribed here in a language unknown to us, but, by its inscriptions, or (to continue the metaphor) by the disposition of its words and phrases, expressing the internal individuality, and only that, to the exclusion of every other individuality. However,

whether that anatomical representation exists here or elsewhere, whether it be localised or scattered, does not in the least alter our conclusion, provided it really exists. Time is not lost in dwelling on the point, because this co-ordination of the innumerable nervous actions of the organic life is the basis of the physical and psychical personality; because all other co-ordinations rest upon and are added to it; because it is the inner man, the material form of his subjectivity, the ultimate ground of his mode of feeling and action, the source of his instincts, his sentiments and passions, or, to use the phraseology of the Middle Ages, his principle of individuation.

Let us now pass from within to without. The periphery of the body forms a surface over which the terminal laminæ of the nerves are unequally distributed. Few or many, the nervous filaments receive and transmit from different parts of the body impressions, that is, molecular shocks; then the nerves are centralised in the spinal cord, and ascend into the medulla and isthmus cerebri. Here there is a new contribution,—that of the cranial nerves,—and now the transmission of the sensorial impressions is complete. Let us not forget that the centrifugal nerves behave in the same way, but in the direction of increasing decentralisation. Briefly, the spinal cord, consisting of a mass of juxtaposed and accumulated ganglia, and particularly the medulla with its special centres (of respiration, phonation, deglutition, etc.), although organs of transmission, represent at the same time the reduction to unity of the infinity of nervous actions scattered throughout the body.

At this point the question becomes exceedingly obscure. The mesencephalon seems to possess a more

complicated reflex function than the medulla, and the medulla a more complex function than the spinal cord. The striated bodies would seem to be a centre in which are organised the habitual or automatic movements. The optic thalami would be the points in which the sensitive impressions gather together, in order to reflect themselves in movements.

However this may be, we know that the internal capsule—a bundle of white substance forming a continuation of the cerebral peduncle—traverses the opto-striate bodies, penetrating into the channel between the optic thalami and the lenticular nucleus, and that it expands within the hemisphere, forming the corona radiata of Reil. This is the gateway through which pass all the sensory and motor fibres that come from or move toward the opposite side of the body. The anterior part contains only motor fibres. The posterior part contains all the sensory fibres, a certain number of motor fibres, and all the fibres coming from the organs of sense. The sensory bundle, being complete, is again divided: one part ascends towards the fronto-parietal convolution; the others bend backward towards the occipital lobe; the motor bundle is distributed in the grey cortex of the motor zones.

These details, wearisome as they may be to the reader despite their brevity, prove the intimate correlation existing between all the parts of the body and the cerebral hemispheres. Here, the study of localisations, though imperfect, has yielded some precise results: a motor zone (the ascending frontal and parietal convolutions, paracentral lobule, and base of the frontal convolutions) in which appear represented the movements of the different parts of the body; also a sensory zone, less precisely defined (the occipital

lobes (?) and the temporo-parietal region). The function of the frontal lobes is not accurately known. We may note, however, in passing, the recent hypothesis of Dr. Hughlings Jackson, who looks upon them as more complex combinations and co-ordinations of the other centres—a representation of representations, as it were.*

We must forego all past and present discussions concerning the physiological and psychological rôle of these centres; they would fill a large volume. Taking the question as a whole, we may say that the cortical layer represents all the forms of the nervous activity: visceral, muscular, tactile, visual, auditory, olfactory, gustatory, motor, significatory. This representation is not direct; an impression does not go from the periphery to the brain like a telegraphic dispatch from one office to another. In one case where the spinal cord was reduced to the size of a quill, and the grey substance was infinitely small, the subject still had feeling (Charcot). But, indirect or doubly indirect, that representation is or can be a total representation. Between the *equivalents* of the nervous actions distributed in the body innumerable connexions exist (commissures between the two hemispheres and between the different centres of each hemisphere); some innate, others established by experience,† and of all possible degrees from the most stable to the most unstable. Physical personality, accordingly, or more precisely, its ultimate representation, appears to us, not like a central point

* *Lectures on the Evolution and Dissolution of the Nervous System*, 1884.

† It is clear, for example, that with a man who does not know how to write, certain associations of very delicate movements are not established, and consequently are neither represented in the brain, nor associated with the nervous dispositions which represent the same words in a vocal form. This applies to many other cases.

from which everything radiates and to which all returns (the pineal gland of Descartes), but like a prodigiously tangled and inextricable maze in which histology, anatomy, and physiology get lost at every turn.

From this exceedingly rough sketch even, it will be seen that the terms consensus, co-ordination are not a mere *flatus vocis*, an abstraction, but the expression of the real nature of things.

2. Let us put back, now, the psychic element which we eliminated, and see what follows. Remember that for us consciousness is not an entity, but a sum of states, each of which is a phenomenon of a particular class, bound up with certain conditions of the activity of the brain, existing when they exist, lacking when they are lacking, disappearing when they disappear. It follows that the sum of the states of consciousness in a man is very inferior to the sum of the nervous actions (reflexes of every order from the most simple to the most composite). To be more precise: during a period of say five minutes a succession of sensations, feelings, images, ideas, acts, is produced in us. It is possible to count them, and to state their number with tolerable precision. During the same period, in the same man, there is produced a much larger number of nervous actions. *Conscious* personality, therefore, cannot be the representation of *all* that takes place in the nervous centres; it is only an abstract, a synopsis of it. This is the inevitable consequence of our mental nature: our states of consciousness are arranged in time, not in space, according to one dimension, not according to several. By the fusion and integration of simple states, highly complex states are formed which enter the series as if they were simple; in a measure, they may even coexist for a time; but ultimately we

must admit that the area of consciousness, the *Umfang des Bewusstseins*, particularly of distinct consciousness, is always very limited. It is, accordingly, impossible to regard conscious personality, contrasted with objective, cerebral personality, as an impression that corresponds exactly to its pattern : it resembles rather a topographical sketch-plan, as contrasted with the country which it represents.

Why do certain nervous actions become conscious, and which? To answer that question would be to solve the problem of the conditions of consciousness. But as we have already said, those conditions are largely unknown. There has also been much discussion concerning the part played in the genesis of consciousness by the five layers of the cortical cells ; but by the admissions of the authors themselves all this is pure hypothesis. Let us proceed ; psychology can derive no profit from unfounded physiology. We know that the unstable states of consciousness evoke and supplant one another. It is the effect of a transmission of force and of a conflict of forces which, for us, takes place, not as is generally supposed, between the states of consciousness themselves, but between the nervous elements that support and engender them. These associations and antagonisms, now so well studied, are not related to our subject. We must go further still, and penetrate to the conditions of their organic unity. States of consciousness are not will-o'-the-wisps, alternately kindled and extinguished : there is something that unites them, and which is the subjective expression of their objective co-ordination. Here is the ultimate ground of their continuity. Although we have already studied this point, yet, in view of its para-

mount importance, I do not hesitate to revert to it under a different form.

Observe that for the present it is not a question of reflective personality, but of that spontaneous, natural feeling of ourselves, which exists in every healthy individual. Each of my states of consciousness enjoys the double character of being such and such, and in addition of being *mine*: a pain is not merely a pain, it is also *my* pain; the vision of a tree, not only the vision of a tree, but *my* vision of a tree. Each state has a mark by which it appears to me as belonging to myself, without which it appears as something foreign to me; as happens, we have already seen, in several morbid cases. This common mark is the sign of a common origin, and whence could it spring but from the organism? Let us imagine we were able to abolish in a fellow-man the five special senses and with them all their psychological products (perceptions, images, ideas, associations of ideas with one another and of emotions with ideas). That done, there would remain the internal organic life, with its own special sensibility—the expression of the state and of the activity of each organ, of their general or local variations, of the rise or the fall of the vital tone. The state of a man profoundly asleep sensibly approaches to our hypothesis. Essay, now, the contrary hypothesis; we find it absurd and self-contradictory. We cannot conceive the special senses, with the psychic life which they support, as isolated from the general sensibility and suspended in emptiness. The sensorial apparatus are not abstractions: visual or auditory apparatus in general, such as are described in treatises on physiology, do not exist, but only concrete, individual apparatus, of which there are never produced two com-

pletely identical specimens in individuals of the same species, except, perhaps, occasionally in twins. But this is not all. Besides having its special constitution in each individual—a mark which it directly and necessarily stamps upon all its products—each sensorial apparatus depends, at all times and under all forms, on the organic life, on circulation, digestion, respiration, secretion, and the rest. These various expressions of the individuality are added to every perception, emotion, and idea; they are one with these, as harmonics are with the fundamental tone. This personal, possessive character of our states of consciousness is not, therefore, as some authors have held, the result of a more or less explicit judgment which affirms them as mine, at the instant they are produced. *The personal mark is not superadded, but is included*; it forms an integral part of the event, and results from its physiological conditions. By studying the state of consciousness alone we cannot discover its origin; for it cannot at the same time be effect and cause, subjective state and nervous action.

Pathological facts confirm this conclusion. We have seen the feeling of the ego rise or fall according to the state of the organism; we have seen certain patients maintain that their “sensations have changed,” which means that the fundamental tone has no longer the same harmonics. Finally, we have seen states of consciousness gradually lose their personal character, become objective and alien to the individual. Can these facts be explained on any other theory?

Stuart Mill, in a passage often quoted,* asks where

*In his *Examination of Sir William Hamilton's Philosophy*. It is but fair to observe that in the form in which Mill puts the question, the reduction of the ego to the organism would not help matters much, for in this passage he con-

is the bond, the inexplicable law, "the organic union," which connects one state of consciousness with another, the common and permanent element; and he finds that in the end we can affirm nothing of the mind, except its states of consciousness. Undoubtedly so, if we confine ourselves to pure ideology. But a group of effects is not a cause, and however minutely we may study them, our work will be incomplete if we do not descend lower—into that dark region where, as Taine says, "innumerable currents incessantly circulate without our being conscious of them." The organic bond demanded by Stuart Mill exists, by definition, so to speak, in the organism.

Thus the organism and the brain, as its highest representation, constitute the real personality, containing in itself all that we have been and the possibilities of all that we shall be. The whole individual character is inscribed there with all its active and passive aptitudes, sympathies, and antipathies; its genius, talents, or stupidity; its virtues, vices, torpor, or activity. What emerges and reaches consciousness is little only compared with what lies buried below, albeit still active. Conscious personality is never more than a feeble portion of physical personality.

The unity of the ego, accordingly, is not that of the single entity of spiritualists, dispersing itself into multiple phenomena, but the co-ordination of a certain number of incessantly renascent states, having for their sole support the vague sense of the body. This

siders the body not as a physiologist, but as a metaphysician. We note, incidentally, that the theory maintained here, although materialistic in form, can be adapted to any metaphysics. We essay to reduce conscious personality to its *immediate* conditions—the organism. As regards the final conditions of those conditions, we have nothing to say, and every one is free to conceive them in his own way. Regarding this point, see the very pertinent remarks of M. Fouillée in his *La science sociale contemporaine*, pp. 224-225.

unity does not pass from above to below, but from below to above; it is not an initial, but a terminal point.

Does a perfect unity exist? Obviously not in a strict mathematical sense. Relatively, it is met with on rare and transient occasions. In a good marksman taking aim, or in a skilled surgeon performing a difficult operation, all converges, both physically and mentally. But, note the result: in such conditions the awareness of the real personality disappears; the conscious individual is reduced to an idea; so that perfect unity of consciousness and the awareness of personality exclude each other. We may reach the same conclusion by a different course. The ego is a co-ordination. It oscillates between two extreme points at which it ceases to exist, viz., perfect unity and absolute inco-ordination. All the intermediate degrees are met with in fact, and with no line of demarcation between the healthy and the morbid; the one encroaches on the other.*

The unity of the ego, in a psychological sense, is, accordingly, the cohesion, during a given period, of a certain number of distinct states of consciousness, accompanied by others less distinct, and by a multitude of physiological states which, though not accompanied by consciousness like the others, yet operate as powerfully as they if not more so. Unity means co-ordination. The conclusion of all is, that the consensus of consciousness being subordinate to the consensus of the organism, the problem of the unity of the ego is,

*Even in the normal state the co-ordination is often sufficiently loose to allow several series to coexist separately. We can walk or perform manual work with a vague and intermittent consciousness of the movements, at the same time singing and musing; but if the activity of thought increases, the singing will cease. With many people it is a kind of substitute for intellectual activity, an intermediate state between thinking and not-thinking.

in its ultimate form, a biological problem. To biology belongs the task of explaining, if it can, the genesis of organisms and the solidarity of their component parts. Psychological interpretation can only follow in its wake. This we have attempted to demonstrate in detail by the exposition and discussion of morbid cases. At this point, then, our task ends.

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